```
=> d que stat l19
L1             3 SEA FILE=HCAPLUS ABB=ON  "TSAI SHIAO WEN"/AU
L19           17 SEA FILE=HCAPLUS ABB=ON  (?CROSS?(W)?LINK?) AND (?POLYSACC? OR
                 L1 OR ?HYALURON?(W)?ACID?)(W)?PROTEIN?

=> d ibib abs l19 1-17

L19  ANSWER 1 OF 17  HCAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2003:414120  HCAPLUS
DOCUMENT NUMBER:          138:380827
TITLE:                    Method for producing cross-linked
                          polysaccharide-protein
                          bio-composites
INVENTOR(S):              Tsai, Shiao-Wen; Chen, Jui-Hsiang; Yang, Chiung-Lin
PATENT ASSIGNEE(S):       Industrial Technology Research Institute, Taiwan
SOURCE:                   U.S. Pat. Appl. Publ., 10 pp.
                          CODEN: USXXCO
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE          APPLICATION NO.   DATE
     ---------------   ----  --------      ---------------   --------
     US 2003100739      A1   20030529      US 2002-76288     20020219
PRIORITY APPLN. INFO.:                   TW 2001-90119567 A  20010810
AB   A method for producing cross-linked
     polysaccharide-protein bio-composites, comprises: (a)
     preparing a mixture of the polysaccharide solution and protein solution, the
weight
     ratio of polysaccharide and protein is in a range of 20/80 to 80/20. (b)
     adjusting the pH value between 3 and 11 by acid and hydroxyl compound (c)
     processing the crosslinking reaction in the water/organic solution that
contains
     the crosslinking agent.

L19  ANSWER 2 OF 17  HCAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2001:903994  HCAPLUS
DOCUMENT NUMBER:          136:39534
TITLE:                    Hydrogel product for adsorption purposes
INVENTOR(S):              Porath, Jerker; Ersson, Bo
PATENT ASSIGNEE(S):       Swed.
SOURCE:                   PCT Int. Appl., 32 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE          APPLICATION NO.   DATE
     ---------------   ----  --------      ---------------   --------
     WO 2001094007      A1   20011213      WO 2001-SE1278    20010607
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
             RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US,
             UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
```

BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
SE 2000002152 A 20011209 SE 2000-2152 20000608
SE 516594 C2 20020205
EP 1289651 A1 20030312 EP 2001-938915 20010607
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
US 2003186807 A1 20031002 US 2003-297544 20030528
PRIORITY APPLN. INFO.: SE 2000-2152 A 20000608
US 2000-209999P P 20000608
WO 2001-SE1278 W 20010607

AB The present invention relates to a hydrogel product for adsorption purposes where an in-water insol. support matrix is **cross-linked** with polymers which give rise to an in-water swellable adsorbent. Further the polymers are internally **cross-linked** through at least one crosslinking agent. As a support matrix an organic polymer is used or a combination of such, e.g. polysaccharide such as agar, cellulose, starch and so on, protein and components of protein and polysaccharide. The support matrix is substituted with a first, soluble polymer material chemical bound to the support matrix, whereupon addnl. polymer materials optionally are built-in in the primary synthesized support matrix complex through different kinds of **cross-links**, wherein optionally the support matrix is present in the form of an acid- and base-stable residue. The hydrogel product may have the structural formula PYX1A1(Xz)Xn where P is the support matrix, Y is a nitrogen, sulfur or oxygen bridge, X1, Xn, Xz are the same or different di-, tri- or polyfunctional crosslinking agents, A1 is a water-soluble polymer material, n is a whole number where n ≥ 2; and z is 0 or a whole number where z ≥ 0. The hydrogel product may also have the structural formula PYX1A1(X2A2)XiAi(Xz)Xn where P is a support matrix, Y is a nitrogen, sulfur or oxygen bridge, X1, Xi, Xn, Xz are the same or different di-, tri- or polyfunctional crosslinking agents, A1, Ai are water-soluble polymer material, preferably the same or different kinds of **cross-linked** residues of amines, and n and i are whole nos. where i ≥ 2 and n ≥ 2; and z is 0 or a whole number where z ≥ 0. One or more of A1, Ai consist(s) of residues of a straight or branched polyalkylene amine, preferably oligo or polyethylene amine, or residues of other amines, the most preferred a polyalkylene diamine.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 3 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:197354 HCAPLUS
TITLE: Use of physical and chemical methods for characterization of multivalent pneumococcal conjugate vaccines
AUTHOR(S): Frasch, Carl E.; Lee, Che-Hung
CORPORATE SOURCE: Division of Bacterial Products, Center for Biologics Evaluation and Research, FDA, Rockville, MD, 20852, USA
SOURCE: Abstracts of Papers - American Chemical Society (2001), 221st, BIOT-047
CODEN: ACSRAL; ISSN: 0065-7727
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal; Meeting Abstract
LANGUAGE: English

AB The pneumococcal 7-valent **polysaccharide-protein** conjugate vaccine, Prevnar, manufactured by Wyeth Lederle Vaccines is recommended for use in all children up to 2 yr of age for prevention of invasive pneumococcal disease including meningitis due to types included

in the vaccine (types 4, 6B, 9V, 14, 18C, 19F, and 23F). Manufacture of pneumococcal conjugate vaccines is controlled using both phys. and chemical tests. Mol. size of the conjugate is an important measure for product consistency and as a stability indicating parameter. The composition, proof of identity and polysaccharide purity is achieved using NMR. The size of the polysaccharide can be estimated by SEC HPLC or by MALLS. The polysaccharide must be activated before it can be **cross-linked** with the carrier protein. The degree of oxidation of the polysaccharide is a measure of the extent of activation. For consistency of conjugation, polysaccharide to protein ratio is an important specification as is the yield of conjugated polysaccharide. It is also important to follow a unique amino acid, such as hydroxyethyl lysine created as a result of the protein-saccharide linkage, as a measure of the number of covalent linkages created during conjugation. During manufacturing the amount of free unconjugated saccharide should be reduced to a min., and increases in free saccharide should be followed as part of the stability program.

L19 ANSWER 4 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:674382 HCAPLUS
DOCUMENT NUMBER: 130:78271
TITLE: Mapping cell wall polysaccharides of living microbial cells using atomic force microscopy
AUTHOR(S): Gad, M.; Itoh, Arimichi; Ikai, Atsushi
CORPORATE SOURCE: Biodynamics Laboratory, Tokyo Institute of Technology, Yokohama, 226, Japan
SOURCE: Cell Biology International (1997), 21(11), 697-706
CODEN: CBIIEV; ISSN: 1065-6995
PUBLISHER: Academic Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Functionalized atomic force microscope tips were used to sense specific forces of interaction between ligand-receptor pairs and to map the positions of polysaccharides on a living microbial cell surface. Gold-coated tips were functionalized with Con A using a **cross-linker** with a spacer arm of 15.6 Å. It was possible to measure the binding force between Con A and mannan polymers on the yeast (Saccharomyces cerevisiae) cell surface. This force ranged from 75 to 200 pN. The shape of the force curve indicated that the polymers were pulled away from the cell surface for a fairly long distance that sometimes reached several hundred nanometers. The distribution of mannan on the cell surface was mapped by carrying out the force measurement in the force volume mode of atomic force microscopy (AFM). During the measurement, the maximum cantilever deflection after contact between the tip and the sample was kept constant at 10 nm using trigger mode to keep the pressing force on the sample surface as gently as possible at a force of 180 pN. This regime was used to minimize the non-specific adhesion between the tip and the cell surface. Specific mol. recognition events took place on specific areas of the cell surface that could be interpreted as reflecting a non-uniform distribution of mannan on the cell surface. (c) 1997 Academic Press.
REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 5 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:296952 HCAPLUS
DOCUMENT NUMBER: 129:53190
TITLE: Structural properties of group B streptococcal type III polysaccharide conjugate vaccines that influence

immunogenicity and efficacy
AUTHOR(S): Wessels, Michael R.; Paoletti, Lawrence C.; Guttormsen, Hilde-Kari; Michon, Francis; D'ambra, Anello J.; Kasper, Dennis L.
CORPORATE SOURCE: Channing Laboratory, Brigham and Women's Hospital, Boston, MA, 02115, USA
SOURCE: Infection and Immunity (1998), 66(5), 2186-2192
CODEN: INFIBR; ISSN: 0019-9567
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB In this study, we tested the hypothesis that the immunogenicity and protective efficacy of **polysaccharide-protein** conjugate vaccines are influenced by three variables: (i) mol. size of the conjugate, (ii) mol. size of the polysaccharide used for conjugation, and (iii) extent of polysaccharide-to-protein crosslinking. Type III group B Streptococcus capsular polysaccharide was linked by reductive amination at multiple sites to tetanus toxoid to create a **polysaccharide-protein** conjugate (III-TT). A single lot of III-TT was fractionated into small, medium, and large Mr pools. Whereas all three conferred protection in a maternal immunization-neonatal challenge model in mice, the smallest Mr conjugate evoked less polysaccharide-specific IgG than the two larger Mr conjugates. To test whether the mol. size of the polysaccharide used for conjugation also affected the immunogenicity of the conjugate, vaccines were synthesized using capsular polysaccharides with Mrs of 38,000, 105,000, and 349,000. Polysaccharide-specific IgG responses in mice increased with the Mr of the polysaccharides, and protective efficacy was lower for the smallest polysaccharide conjugate compared to the other two vaccines. Immunogenicity testing of a series of vaccines prepared with different degrees of polysaccharide-to-protein crosslinking demonstrated higher polysaccharide-specific antibody responses as the extent of crosslinking increased. However, opsonic activity was greatest in mouse antiserum raised to a moderately **cross-linked** conjugate, suggesting that some antibodies evoked by highly **cross-linked** conjugates were directed to a nonprotective epitope. We conclude that conjugate size, polysaccharide size, and degree of **polysaccharide-protein** crosslinking influence the immunogenicity and protective efficacy of III-TT conjugate vaccines.
REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 6 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:647007 HCAPLUS
DOCUMENT NUMBER: 119:247007
TITLE: Lipopolysaccharide and peptidoglycan share binding sites on human peripheral blood monocytes
AUTHOR(S): Rabin, Ronald L.; Bieber, Marcia M.; Teng, Nelson N. H.
CORPORATE SOURCE: Sch. Med., Stanford Univ., Stanford, CA, 94305-5317, USA
SOURCE: Journal of Infectious Diseases (1993), 168(1), 135-42
CODEN: JIDIAQ; ISSN: 0022-1899
DOCUMENT TYPE: Journal
LANGUAGE: English
AB P73, a binding site for lipopolysaccharide (LPS) on human peripheral blood monocytes was identified using the radiolabeled photoaffinity **cross-linker** sulfosuccinimidyl 2-(p-azidosalicylamido)ethyl-1,3'-dithiopropionate (SASD). The 125I-labeled conjugate of SASD and LPS (125-labeled ASD-LPS) was bound to monocytes and

UV **cross-linked**, and the cellular exts. were analyzed with two-dimensional SDS-PAGE and autoradiog. In addition to the major binding site on human monocytes at 73 kDa, isoelec. point 5.95, there were multiple minor binding sites that recognized both smooth and rough LPS. Binding of 125I-labeled ASD-LPS to monocytes is concentration dependent, decreased in the absence of calcium and magnesium, and inhibited by either excess LPS or the low-mol.-weight soluble isolate of bacterial cell wall peptidoglycan (sPGN). However, sPGN only minimally stimulates tumor necrosis factor (TNF) secretion by human peripheral blood mononuclear cells. In contrast, the relatively insol. high-mol.-weight peptidoglycan significantly stimulates TNF secretion.

L19 ANSWER 7 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1990:474937 HCAPLUS
DOCUMENT NUMBER: 113:74937
TITLE: Cell-wall polysaccharides and glycoproteins of parenchymatous tissues of runner bean (Phaseolus coccineus)
AUTHOR(S): Ryden, Peter; Selvendran, Robert R.
CORPORATE SOURCE: Norwich Lab., A.F.R.C. Inst. Food Res., Norwich, NR4 7UA, UK
SOURCE: Biochemical Journal (1990), 269(2), 393-402
CODEN: BIJOAK; ISSN: 0306-3275
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Polymers were solubilized from the cell walls of parenchyma from mature runner-bean pods with min. degradation by successive exts. with cyclohexane-trans-1,2-diamine-N,N,N',N'-tetraacetate(CDTA), Na2CO3, and KOH to leave the α-cellulose residue, which contained **cross-linked** pectic polysaccharides and Hyp-rich glycoproteins. These were solubilized with chlorite/acetic acid and cellulase. The polymers were fractionated by anion-exchange chromatog., and fractions were subjected to methylation anal. The pectic polysaccharides differed in their ease of extraction and a small proportion were highly **cross-linked.** The bulk of the pectic polysaccharides solubilized by CDTA and Na2CO3 were less branched than those solubilized by KOH. Most of the pectic polysaccharides were not degraded during extraction The protein-containing fractions included Hyp-rich and Hyp-poor glycoproteins associated with easily extractable pectic polysaccharides, Hyp-rich glycoproteins solubilized with 4M-KOH + borate, the bulk of which were not associated with pectic polysaccharides, and highly **cross-linked** Hyp-rich glycoproteins. Isodityrosine was not detected, suggesting that it does not have a (major) crosslinking role in these walls. Instead, it is suggested that phenolics, presumably linked to C-5 of 3,5-linked Araf residues of Hyp-rich glycoproteins, serve to crosslink some of the polymers. There were 2 main types of xyloglucan, with different degrees of branching. The bulk of the less branched xyloglucans were solubilized by more-concentrated alkali. The anomeric configurations of the sugars in one of the highly branched xyloglucans were determined by 13C-NMR spectroscopy. The structural features of the cell wall polymers and complexes are discussed in relation to the structure of the cell walls of parenchyma tissues.

L19 ANSWER 8 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1990:457274 HCAPLUS
DOCUMENT NUMBER: 113:57274
TITLE: Identification of lipopolysaccharide-binding proteins in 70Z/3 cells by photoaffinity **cross-linking**
AUTHOR(S): Kirkland, Theo N.; Virca, G. Duke; Kuus-Reichel, Tina;

Multer, Frances K.; Kim, Steve Y.; Ulevitch, Richard J.; Tobias, Peter S.
CORPORATE SOURCE: Dep. Pathol., Univ. California, San Diego, CA, 92161, USA
SOURCE: Journal of Biological Chemistry (1990), 265(16), 9520-5
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A radioiodinated, photoactivatable derivative of Salmonella minnesota Re595 lipopolysaccharide (LPS) was used to label LPS-binding proteins in 70Z/3 cells which can be induced by LPS to secrete Igs). The labeled proteins were resolved by SDS-PAGE and visualized by autoradiog. 125I-labeled-2-(p-azidosalycylamide)1,3'-dithiopropionamide S. minnesota Re595 LPS (125I-ASD-Re595) labeled a limited number of proteins. The most prominent of these had an apparent mol. mass of 18 kDa. Less prominent labeling of 25- and 28-kDa proteins was also seen. Labeling was saturated by 5 μg/mL 125I-ASD-Re595 and was inhibited by a 10-100-fold excess of unlabeled LPS or lipid A. Labeling was maximal within 30 min at 37°C; much less labeling occurred at lower temps. The proteins labeled with 125I-ASD-Re595 appear to be on the surface of the cell, since they can be digested by trypsin and were found in the membrane fraction of the cell but not in the cytosol. Studies with competitive inhibitors suggested that the proteins bind to the lipid A region of the LPS mol. Biol. inactive lipid A analogs were poor inhibitors of labeling, suggesting that the LPS-binding proteins could discriminate between active lipid A and inactive analogs. These studies suggest that the 18- and 25-kDa proteins bind specifically to the lipid A region of the LPS mol. and should be considered as candidates for a functional LPS receptor.

L19 ANSWER 9 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1988:491099 HCAPLUS
DOCUMENT NUMBER: 109:91099
TITLE: Specific endotoxic lipopolysaccharide-binding proteins on murine splenocytes. I. Detection of lipopolysaccharide-binding sites on splenocytes and splenocyte subpopulations
AUTHOR(S): Lei, Mei Guey; Morrison, David C.
CORPORATE SOURCE: Med. Cent., Univ. Kansas, Kansas City, KS, 66103, USA
SOURCE: Journal of Immunology (1988), 141(3), 996-1005
CODEN: JOIMA3; ISSN: 0022-1767
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Expts. have been carried out using a unique radio-iodinated, disulfide-reducible, photoactivatable lipopolysaccharide (LPS) derivative (ASD-LPS) to detect specific LPS-binding proteins on murine splenocytes. Fractionation of LPS-photo-**cross-linked**, reduced, and solubilized splenocyte exts. on two-dimensional polyacrylamide gels has allowed the identification of an 80-kDa LPS-binding protein with approx. pI of 6.5. This LPS-binding protein is present on partially purified populations of splenic B lymphocytes, T lymphocytes, and macrophages. It is also the dominant LPS-binding protein on the murine 70Z/3 B cell line and the YAC-1 and EL4 T cell lines but is not detectable on the undifferentiated murine Sp2/O myeloma cell line. Of potential importance is the fact that the 80-kDa protein appears to be indistinguishable when photolabeled exts. of splenocytes from the C3HeB/FeJ (lpsn) and LPS-nonresponder C3H/HeJ (lpsd) mice are compared.

L19 ANSWER 10 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1986:587214 HCAPLUS

DOCUMENT NUMBER: 105:187214
TITLE: Chemical analyses on cell envelope polymers of the halophilic, phototrophic Rhodospirillum salexigens
AUTHOR(S): Evers, D.; Weckesser, J.; Juergens, U. J.
CORPORATE SOURCE: Inst. Biol. II, Mikrobiol., Albert-Ludwigs-Univ., Freiburg, D-7800, Fed. Rep. Ger.
SOURCE: Archives of Microbiology (1986), 145(3), 254-8
CODEN: AMICCW; ISSN: 0302-8933
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Whole cells of R. salexigens, an obligatory halophilic bacterium, have a very low peptidoglycan content (0.17 μmol muramic acid/mg cell dry weight) which is not sufficient to form a sacculus structure. The isolated peptidoglycan contains glucosamine, muramic acid, diaminopimelic acid, alanine, and glutamic acid in a molar ratio of 1:1:1:2:3. The degree of **cross linking** is 30%. A polysaccharide consisting of glucosamine, an unknown compound X, and a 2-amino-2-deoxypentose (relative molar ratio: 1:2:1) was extracted into the water phase of phenol-water exts. of whole cells. The polysaccharide cosedimented with peptidoglycan when cell homogenates were centrifuged in the presence of ≥4% NaCl (100,000 + g, 4 h) or on a sucrose gradient (20-60% sucrose, 28,000 + g, 16 h) in the presence or absence of NaCl and(or) EDTA. Lack of β-hydroxy fatty acids and of 2-keto-3-deoxyoctonate in all phenol-water extract fractions, as well as in the whole cell hydrolyzate, indicates the absence of common outer membrane lipopolysaccharide in R. salexigens. Removal of the cell surface layer exposed 6 proteins to labeling with radioactive I catalyzed by lactoperoxidase. These proteins are suggested to be constituents of the outer membrane of R. salexigens.

L19 ANSWER 11 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1986:166598 HCAPLUS
DOCUMENT NUMBER: 104:166598
TITLE: Translocation of protein kinase C during membrane immunoglobulin-mediated transmembrane signaling in B lymphocytes
AUTHOR(S): Chen, Zheng Z.; Coggeshall, K. Mark; Cambier, John C.
CORPORATE SOURCE: Dep. Med., Natl. Jew. Cent. Immunol. Respir. Med., Denver, CO, 80206, USA
SOURCE: Journal of Immunology (1986), 136(6), 2300-4
CODEN: JOIMA3; ISSN: 0022-1767
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Previous studies have implicated a role for protein kinase C (PKC) in transmembrane signal transduction by B cell surface Ig. Specifically, the pharmacol. PKC activator, phorbol myristate acetate, mimics the biol. effects of membrane Ig (mIg) **cross-linking** ligands, and **cross-linking** of mIg induces polyphosphoinositide hydrolysis generating diacylglycerol, a potent activator of PKC. Studies described here addnl. implicate PKC in mIg-mediated signaling by demonstrating rapid translocation of activatable PKC (PKCa) from cytosol to Triton-soluble membrane fractions after **cross-linking** of mouse cell surface IgM or IgD. This response, which is also induced by phorbol myristate acetate and lipopolysaccharide, is detectable within 1 min of mIg **cross-linking** and is followed within 4 min by addnl. translocation of PKCa to a Triton-insol. particulate compartment. The ability of dibutyryl cAMP plus theophylline to inhibit polyphosphoinositide hydrolysis, PKCa translocation, and the B cell's subsequent biol. response suggests that these events may be causally related.

L19 ANSWER 12 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1970:74723 HCAPLUS
DOCUMENT NUMBER: 72:74723
TITLE: Solubilization of collagen and protein-polysaccharides from the developing cartilage of lathyritic chicks
AUTHOR(S): Glimcher, Melvin J.; Seyer, Jerome; Brickley, Diane M.
CORPORATE SOURCE: Harvard Med. Sch., Massachusetts Gen. Hosp., Boston, MA, USA
SOURCE: Biochemical Journal (1969), 115(5), 923-6
CODEN: BIJOAK; ISSN: 0264-6021
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The solubilization of collagen and protein-polysaccharides from the developing cartilage of normal and lathyritic chicks was studied by using mild extraction procedures. One-third of the protein-polysaccharides could be solubilized in salt solns. at neutral pH from normal cartilage, whereas 95-100% could be extracted from the cartilage of animals that were severely lathyritic. Likewise, whereas in normal animals the collagen of cartilage was essentially insol. in salt solns. at neutral pH, in lathyritic animals it was almost completely soluble The increased solubility of the collagen of cartilage from lathyritic animals enabled sufficient material to be collected so that the pure α1 chains of the collagen were isolated by repeated reconstitution, precipitation and CM-cellulose column chromatog. The purified α1 component was characterized by its relatively high content of hydroxylysine (14 residues/1000 amino acids). About 37% of the collagen from the cartilage of normal chick embryoscould be extracted as the gelatin at pH 7.4 in LiCl solution This was accompanied by the extraction of approx. 14% of the protein-polysaccharide content. The protein-polysaccharides and the collagen from normal animals could be extracted from the cartilage relatively independently of one another under mild conditions. These same components obtained from lathyritic animals easily separated from one another after solubilization. This provided evidence that the 2 components are probably not covalently **cross-linked.** The collagen of cartilage extracted as a gelatin from normal animals contained a high proportion of α chains compared with β dimers, similar to the lathyritic collagen of cartilage and other tissues, and similar to the gelatin extracted from normal chick bone.

L19 ANSWER 13 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1968:46344 HCAPLUS
DOCUMENT NUMBER: 68:46344
TITLE: Hydroxyproline-O-glycosidic linkage of the plant cell wall glycoprotein extensin
AUTHOR(S): Lamport, Derek T. A.
CORPORATE SOURCE: Michigan State Univ., East Lansing, MI, USA
SOURCE: Nature (London, United Kingdom) (1967), 216(5122), 1322-4
CODEN: NATUAS; ISSN: 0028-0836
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The isolation of hydroxyproline-O-glycosides from partial alkaline hydrolyzates of tomato cell walls is described. An arabinose oligosaccharide is apparently attached as a substituent on the hydroxyl group of hydroxyproline (I), i.e., the C-1 of arabinose is linked glycosidically with the C-4 of I. Thus, extensin, a primary cell wall protein rich in hydroxyproline, emerges as a polypeptide backbone where most, if not all, of the numerous I residues (about 30% of amino acid residues in tomato cell walls) are involved in a carbohydrate-protein linkage. The short arabinose oligosaccharides may serve as attachment

regions for other wall polysaccharides. A short sequence of extensin, consisting of 2 I residues and 2 or 3 other amino acid residues, could be regarded as the **cross link** between 2 polysaccharide chains. Thus, a small amount of extensin is potentially capable of **cross linking** a hugely disproportionate amount of wall polysaccharide. In this way, even the minute amts. of wall I characteristic of some species could play an important part in determining the properties of the primary cell wall.

L19 ANSWER 14 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1968:11265 HCAPLUS
DOCUMENT NUMBER: 68:11265
TITLE: Acid mucopolysaccharides and hydration of cartilage in lathyrism
AUTHOR(S): Levene, Charles I.; Franco-Browder, S.; Kranzler, J.; Kaufman, J.
CORPORATE SOURCE: Univ. of Chicago, Chicago, IL, USA
SOURCE: Biochim. Physiol. Tissu Conjonctif, Conf. Commun. Symp. Int. (1966), Meeting Date 1965, 649-54
CODEN: 16YZAK
DOCUMENT TYPE: Conference
LANGUAGE: English
AB Treatment of chick embryos with β-aminopropionitrile results in fragility of the connective tissues, and a 20-30% increase in the hydration of the tissue, as shown by a pronounced swelling of the cartilage. It does not affect the acid mucopolysaccharide or the acid **mucopolysaccharide-protein** complex, suggesting that the acid mucopolysaccharides are not involved in the intramol. **cross -linking** of collagen. 4 references.

L19 ANSWER 15 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1967:419949 HCAPLUS
DOCUMENT NUMBER: 67:19949
TITLE: Protein conjugates of polysaccharide from Cryptococcus neoformans
AUTHOR(S): Goren, Mayer B.; Middlebrook, Gardner M.
CORPORATE SOURCE: Natl. Jewish Hosp., Denver, CO, USA
SOURCE: Journal of Immunology (1967), 98(5), 901-13
CODEN: JOIMA3; ISSN: 0022-1767
DOCUMENT TYPE: Journal
LANGUAGE: English
AB To enhance the antigenicity of the capsular polysaccharide (I) from C. noeformans, the soluble deproteinized acidified I was lyophilized, dissolved in Me2SO (50 mg. I/12.5 ml.), and treated with m-nitrophenylisocyanate (30 mg.) in the presence of 1 ml. pyridine for 4 hrs. at 60°. The nitrocarbanilated I obtained was reduced with NaHS at pH 7.8, diazotized, and coupled to bovine serum γ-globulin (BGG). The Me2SO was the only solvent which prevented deacetylation of I (deacetylated I lost its antigenicity); diazotization of the aminocarbanilated I was carried on in dilute solution to prevent precipitation of coupled products with a low protein-to-carbohydrate ratio and little antigenicity; well dispersed gels were obtained after sonication for 15-30 min., and used as such for immunization, since **cross-linking** of I during drying or precipitation also decreased the antigenicity. Mice were injected with 10 γ of I-BGG in complete Freund's adjuvant and developed titers against both BGG and I. I-mouse γ-globulin, I, or deacetylated I-BGG failed to elicit antibodies against I. At larger doses (35 γ I-BGG) immune paralysis developed against I but not against BGG. Among the various I-BGG prepns., the most antigenic ones had a higher (2-2.5:1) ratio of protein to I.

L19 ANSWER 16 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1964:46591 HCAPLUS
DOCUMENT NUMBER: 60:46591
ORIGINAL REFERENCE NO.: 60:8246e-g
TITLE: Protein-polysaccharide in connective tissue: inhibition of phase separation
AUTHOR(S): Weinstein, Harry; Sachs, Coleman R.; Schubert, Maxwell
CORPORATE SOURCE: New York Univ. School of Med., New York, NY
SOURCE: Science (Washington, DC, United States) (1963), 142(3595), 1073-5
CODEN: SCIEAS; ISSN: 0036-8075
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB A macromol. (I) of protein and chondroitin sulfate inhibits sedimentation of Ba polystyrene sulfonate (II) and of Ca phosphate at low but not at high g values. Sedimentation of II removes a large fraction of I from solution, but sedimentation of Ca phosphate does not. I consists of .apprx.15% protein, 70% chondroitin sulfate, and 5% keratin sulfate and has a mol. weight above 106. Both Ca phosphate and II precipitate readily from water and sediment completely at values below 100 g. In the presence of 0.5 to 5.0 mg./ml. I, only small amts. of the insol. salts sediment when centrifuged at .apprx.500 g, leaving strongly opalescent supernatant solns. from which neither salt can be completely sedimented at high centrifugal speeds (30,000 to 100,000 g). Ca phosphate sediments contain 10-30% of the I originally in solution while the II sediments contain 30-70%, depending on conditions. Chondroitin sulfate, in contrast to I, has no effect on the precipitation of II. This makes it unlikely that Ba++ forms **cross-links** between polystyrene sulfonate and I so that when II is sedimented it carries some I with it. Expts. with pepsin or trypsin showed that to inhibit the precipitation of II, the presence of intact I is essential. These effects are attributed to entanglement of linear polyanionic chains. In connective tissues the presence of diffuse protein-polysaccharides may inhibit or control calcification. In tissues where different protein-polysaccharides exist, their mutual entanglement could modify each other's properties.

L19 ANSWER 17 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1963:483210 HCAPLUS
DOCUMENT NUMBER: 59:83210
ORIGINAL REFERENCE NO.: 59:15509f-g
TITLE: Effect of calcium salts on the solubilization of calfskin collagen by monochloroacetic acid. III
AUTHOR(S): Comte, Ph.; Balme, F.; Villa, L.
CORPORATE SOURCE: Centre Tech. Cuir, Lyons, Fr.
SOURCE: Bull. Assoc. Franc. Ingrs., Chimistes Techniciens Ind. Cuir Doc. Inform. Centre Tech. Cuir (1963), 25, 141-52
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB cf. CA 58, 12792f, 14333f. Monochloroacetic acid (I) (3 g./1.) dissolved almost all the collagen (II) of ground calfskin. Previous treatment with 2-10% CaCl2 solns. increased the amount of collagenous and noncollagenous proteins solubilized. The mechanism of the action of I and CaCl2 is complex because of the heterogeneity of the calfskin. CaCl2 appeared to act simultaneously on the **cross-linkages** of the poly-peptide chains of II and on **mucopolysaccharide-protein** bonds, as was shown by the presence in the reconstituted II of some free hexosamines and of noncollagenous proteins rich in hydroxypro-line. II reconstituted by salt precipitation from the acid solns.

contained hexosamines more or less bound, the major part being soluble in neutral buffer.

```
=> d que stat l17
L1             3 SEA FILE=HCAPLUS ABB=ON  "TSAI SHIAO WEN"/AU
L15          470 SEA (CROSS?(W) LINK? OR CROSSLINK?) AND (POLYSACC? OR L1 OR
                 HYALURON?(W) ACID?)(W) PROTEIN?
L16           47 SEA L15 AND (BIOCOMPOSIT? OR COMPOSIT?)
L17           42 DUP REMOV L16 (5 DUPLICATES REMOVED)

=> d ibib abs l17 1-42

L17  ANSWER 1 OF 42  WPIDS  COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER:      2003-441029 [41]   WPIDS
DOC. NO. NON-CPI:      N2003-352181
DOC. NO. CPI:          C2003-116536
TITLE:                 Implantable composition for stimulating neural
                       tissue growth at lesion site, has cell compatible and
                       bioerodable material for tissue growth, and cell
                       producing trophic factors and/or extracellular matrix
                       molecules.
DERWENT CLASS:         A96 B04 D16 D22 P31
PATENT ASSIGNEE(S):    (GOLD-I) GOLDBERG E P; (STOP-I) STOPEK J B; (STRE-I)
                       STREIT J W; (UYFL) UNIV FLORIDA
COUNTRY COUNT:         100
PATENT INFORMATION:

     PATENT NO   KIND DATE     WEEK      LA   PG
     -------------------------------------------
     WO 2003026489 A2 20030403 (200341)* EN   66
        RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU
            MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW
         W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
            DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
            KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT
            RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM
            ZW

APPLICATION DETAILS:

     PATENT NO   KIND                  APPLICATION      DATE
     ------------------------------------------------------------
     WO 2003026489 A2                  WO 2002-US30900  20020930


PRIORITY APPLN. INFO: US 2001-325190P  20010928
AN   2003-441029 [41]   WPIDS
AB   WO2003026489 A UPAB: 20030630
     NOVELTY - An implantable composition (I) adapted for stimulating
     growth and guidance of neural tissue (NT) across a lesion site in nerve
     tissue of a mammal, has a space filling, cell compatible and bioerodable
     material for NT growth, and a cell capable of producing neurotrophic
     factor, growth factor, cytokine and/or extracellular matrix molecule,
     seeded on or in the material, to provide neurotrophic support to NT, is
     new.
          DETAILED DESCRIPTION - An implantable composition (I)
     adapted for the stimulation of the growth of and the guidance of neural
     tissue across a lesion site in nerve tissue of a human or non-human
     mammal, comprises a space filling, cell compatible, bioerodable material
     that allows the growth of neural tissue, and seeded on or in the material,
     at least one biologically active cell type capable of producing, upon
     implantation of the composition in the mammal, at least one
     neurotrophic factor, growth factor, cytokine, extracellular matrix
```

molecule or its mixture, that is effective to provide neurotrophic support to mammalian nerve tissue.

ACTIVITY - Tranquilizer; Vulnerary.

MECHANISM OF ACTION - Stimulates growth and guidance of neural tissue (claimed).

Neck musculature of an anesthetized rat was split midline and the lamina of the fourth or fifth vertebra were partially removed. The right dorsolateral funiculus of the spinal cord was cut in order to transect the rubrospinal tract. Upon hemostasis, microporous alginate implants or microporous alginate implants cultured with primary rat microglia were immediately placed into the lesion/injury site. Control animals did not receive an implant (lesion only). The musculature/wound was washed with sterile saline and closed with skin clips. Prior to euthanasia, animals were either retrogradely tract traced with Fluorogold (FG) or anterogradely tract traced with biotinylated dextran amine (BDA). The animals were fixation perfused and spinal cord and brain removed intact. The collected tissue was post-fixed in 4 % (w/v) paraformaldehyde, and spinal cord tissue was cryo-preserved. The red nucleus in the rat midbrain was vibratome sectioned and counterstained with 3 % (w/v) cresyl violet (CV). Sections were viewed under brightfield optical microscopy and red nucleus neurons were enumerated using serological counting techniques and the MCID system. FG labeled red nucleus neurons were enumerated in a similar fashion (without CV), except using fluorescence microscopy. In vivo analysis of microporous alginate foam/microglia **compositions** showed immunopositive regenerating/surviving axons growing into the microporous alginate implant. The implant filled the lesion site. Glial scarring was minimal and astrocytes were found throughout the interface of the host tissue/microporous alginate implant. Immunostaining for peripheral nerve fibers (calcitonin gene related peptide (CGRP) was negative, indicating neurofilament positive fibers were of central nervous system (CNS) origin. Alpha-internexin neurofilament reactivity was also found. Cresyl violet counterstaining revealed a dense, cellular infiltrate, that consisted of Schwann cells, macrophages, microglia, fibroblasts, ependymal cells and other non-identified cells. This staining also showed a smooth interface between damaged and healthy tissue. FG retrograde tract tracing showed robust labeling of red nucleus neurons. Controls had little or no FG labeling. These data indicated that alginate-microglia implant **compositions** promoted regeneration and wound healing of the injured rat rubrospinal tract.

USE - (I) is useful for promoting neuronal regeneration in injured or damaged nerve tissue comprising the spinal cord or brain, of a mammal, by implanting (I) into the tissue of the mammal near the site of injury between the proximal axon stumps and their respective distal segments. The nerve tissue is injured due to spinal cord injury, peripheral nerve injury, neuromas, traumatic head injury, autoimmune disease, degenerative disease, multiple sclerosis, leukodystrophy or their combinations. (I) is also useful for the repair of injured axons, white matter lesions and injured central or peripheral nerves in human or non-human animals, by implanting (I) in the animal near the site of injury between the proximal axon, white matter or peripheral nerve stumps and their respective distal segments. (All claimed.) (I) is useful for promoting the growth and regeneration of axons in central nervous system (CNS), which have been severed by injury or destroyed by disease processes, for bridging spinal cord lesion, and for repairing peripheral nerves which do have a strong innate potential for regeneration.

ADVANTAGE - The **composition** provides a clear opportunity for functional recovery from traumatic spinal cord injury, as currently there is no cure for spinal cord injury, and typically spinal cord injury patients spend the rest of their lives in wheel chairs. This creates enormous health care and rehabilitation costs. The **composition**

allows the patient to regain partial or full neural and motor functions, and in order to move and even walk again.
Dwg.0/0

L17 ANSWER 2 OF 42 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 2003-678137 [64] WPIDS
DOC. NO. CPI: C2003-185179
TITLE: Preparation of **crosslinked polysaccharide protein biocomposites** used in e.g. biomedicine comprises adjusting pH of mixture of polysaccharide and protein solution and processing **crosslinking** reaction.
DERWENT CLASS: A11 A96 B07 D22
INVENTOR(S): CHEN, J; TSAI, S; YANG, C
PATENT ASSIGNEE(S): (INTE-N) IND TECHNOLOGY RES INST
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 2003100739	A1	20030529	(200364)*		10

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 2003100739	A1	US 2002-76288	20020219

PRIORITY APPLN. INFO: TW 2001-119567 20010810
AN 2003-678137 [64] WPIDS
AB US2003100739 A UPAB: 20031006
NOVELTY - Preparation of a **crosslinked polysaccharide protein biocomposite** comprises:
(1) preparing a mixture (M1) of polysaccharide solution and protein solution in a ratio of 20:80-80:20;
(2) adjusting the pH to 3-11 with acid and hydroxyl compound, and
(3) processing the **crosslinking** reaction in water and organic solution containing a **crosslinked** reagent.
USE - Used in biomedicine, histological engineering, material engineering, medical equipment and cosmetics and for hemostats, vascular sealants, orthopedic implant coatings, vascular implant coating, dental implants, wound dressing, antiadhesion barrier, platelet analyzer reagent, research reagent, engineering of cartilage, artificial tendons, blood vessels, nerve regeneration, cornea implants, cell preservation solutions, growth factor and drug delivery and for commercial utilization.
ADVANTAGE - The method eliminates the loss of polysaccharide and reduces the reaction time to 2-4 hours. The solution is manufactured in various types including the shape of a membrane, sponge, fiber, tube or microgranular with homogeneous density and porosity with a wide range of pH and in both acidic and alkaline conditions.
Dwg.0/0

L17 ANSWER 3 OF 42 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2003221128 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12742721
TITLE: Enzyme-catalyzed gel formation of gelatin and chitosan: potential for in situ applications.
AUTHOR: Chen Tianhong; Embree Heather D; Brown Eleanor M; Taylor Maryann M; Payne Gregory F

CORPORATE SOURCE: Center for Biosystems Research, University of Maryland Biotechnology Institute, 5115 Plant Sciences Building, College Park, MD 20742, USA.
SOURCE: Biomaterials, (2003 Aug) 24 (17) 2831-41.
Journal code: 8100316. ISSN: 0142-9612.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: (EVALUATION STUDIES)
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200403
ENTRY DATE: Entered STN: 20030514
Last Updated on STN: 20040316
Entered Medline: 20040315

AB We compared the ability of two enzymes to catalyze the formation of gels from solutions of gelatin and chitosan. A microbial transglutaminase, currently under investigation for food applications, was observed to catalyze the formation of strong and permanent gels from gelatin solutions. Chitosan was not required for transglutaminase-catalyzed gel formation, although gel formation was faster, and the resulting gels were stronger if reactions were performed in the presence of this **polysaccharide**. Consistent with transglutaminase's ability to covalently **crosslink proteins**, we observed that the transglutaminase-catalyzed gelatin-chitosan gels lost the ability to undergo thermally reversible transitions (i.e. sol-gel transitions) characteristic of gelatin. Mushroom tyrosinase was also observed to catalyze gel formation for gelatin-chitosan blends. In contrast to transglutaminase, tyrosinase-catalyzed reactions did not lead to gel formation unless chitosan was present (i.e. chitosan is required for tyrosinase-catalyzed gel formation). Tyrosinase-catalyzed gelatin-chitosan gels were observed to be considerably weaker than transglutaminase-catalyzed gels. Tyrosinase-catalyzed gels were strengthened by cooling below gelatin's gel-point, which suggests that gelatin's ability to undergo a collagen-like coil-to-helix transition is unaffected by tyrosinase-catalyzed reactions. Further, tyrosinase-catalyzed gelatin-chitosan gels were transient as their strength (i.e. elastic modulus) peaked at about 5h after which the gels broke spontaneously over the course of 2 days. The strength of both transglutaminase-catalyzed and tyrosinase-catalyzed gels could be adjusted by altering the gelatin and chitosan **compositions**. Potential applications of these gels for in situ applications are discussed.

L17 ANSWER 4 OF 42 EMBASE
on STN
ACCESSION NUMBER: 2003405371 EMBASE
TITLE: Recognition of bacterial peptidoglycan by the innate immune system.
AUTHOR: Dziarski R.
CORPORATE SOURCE: R. Dziarski, Northwest Ctr. for Medical Education, Indiana University, School of Medicine, 3400 Broadway, Gary, IN 46408, United States. rdziar@iun.edu
SOURCE: Cellular and Molecular Life Sciences, (1 Sep 2003) 60/9 (1793-1804).
Refs: 107
ISSN: 1420-682X CODEN: CMLSFI
COUNTRY: Switzerland
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 004 Microbiology
026 Immunology, Serology and Transplantation
LANGUAGE: English

SUMMARY LANGUAGE: English
AB The innate immune system recognizes microorganisms through a series of pattern recognition receptors that are highly conserved in evolution. Peptidoglycan (PGN) is a unique and essential component of the cell wall of virtually all bacteria and is not present in eukaryotes, and thus is an excellent target for the innate immune system. Indeed, higher eukaryotes, including mammals, have several PGN recognition molecules, including CD14, Toll-like receptor 2, a family of peptidoglycan recognition **proteins**, Nod1 and Nod2, and PGN-lytic enzymes (lysozyme and amidases). These molecules induce host responses to microorganisms or have direct antimicrobial effects.

L17 ANSWER 5 OF 42 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 2003348511 EMBASE
TITLE: A study of the yeast cell wall **composition** and structure in response to growth conditions and mode of cultivation.
AUTHOR: Aguilar-Uscanga B.; Francois J.M.
CORPORATE SOURCE: J.M. Francois, Ctr. de Bioingenierie Gilbert Durand, Inst. Natl. des Sci. Appl., Avenue de Rangeuil, F-31077 Toulouse Cedex 04, France. fran_jm@insa-tlse.fr
SOURCE: Letters in Applied Microbiology, (2003) 37/3 (268-274). Refs: 29
ISSN: 0266-8254 CODEN: LAMIE7
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Aim: The **polysaccharide composition** of the Saccharomyces cerevisiae cell wall was measured under various growth conditions and was compared with the cell wall structure. Methods and Results: Chemical and enzymatic methods were used to determine levels of β-1,3-glucan and 1,6-glucan, mannan and chitin of the yeast cell wall, whereas the structure/resistance of the wall was qualitatively assessed by the sensibility to the lytic action by zymolyase. It was found that the dry mass and **polysaccharides** content of the cell wall could vary by more than 50% with the nature of the carbon source, nitrogen limitation, pH, temperature and aeration, and with the mode of cell cultivation (shake flasks vs controlled fermentors). While no obvious correlation could be found between β-glucan or mannan levels and the susceptibility of whole yeast cells to zymolyase, increase of β-1,6-glucan levels, albeit modest with respect to the growth conditions investigated, and to a lesser extent that of chitin, was associated with decreased sensitivity of yeast cells to the lytic action by zymolyase. Significance and Impact of the Study: Our results indicate that the cell wall structure is merely determined by **cross-linking** between cell wall polymers, pointed out the role of β-1,6-glucan in this process. Hence, this study reinforces the idea that enzymes involved in these **cross-linking** reactions are potential targets for antifungal drugs.

L17 ANSWER 6 OF 42 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 2003215551 EMBASE
TITLE: A complex plant cell wall **polysaccharide**: Rhamnogalacturonan II. A structure in quest of a function.
AUTHOR: Perez S.; Rodriguez-Carvajal M.A.; Doco T.
CORPORATE SOURCE: S. Perez, Ctr. de Rech. sur Macromolec. Veget., CNRS,

University Joseph-Fourier, BP 53X, 38041 Grenoble Cedex, France. serge.perez@cermav.cnrs.fr
SOURCE: Biochimie, (2003) 85/1-2 (109-121).
Refs: 60
ISSN: 0300-9084 CODEN: BICMBE
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Walls of growing plants are extremely complex and sophisticated **composite** materials incorporating a dynamic assembly of **polysaccharides**, **proteins** and phenolics. Among the **polysaccharides**, the pectins encompass a group of acidic heteropolysaccharides; they offer a repertoire of structural complexity associated with the occurrence of, at least, three specific domains. Whereas most of these domains are notable for their structural heterogeneity, one of these, the so-called rhamnogalacturonan II (RG-II) exhibits a remarkable conservation throughout the plant kingdom. RG-II is thought to be the most complex plant **polysaccharide** on Earth (MW 5-10 kDa); its occurrence and strong conservation may indicate that it plays a major role in the structure and growth of higher plants. The present paper examines the most recent findings related to the occurrence, the structures, biosynthesis, biological role and properties, functional properties and technological applications of RG-II. Particular emphasis is given on the description of the three-dimensional structures of RG-II, in its monomeric and dimeric form as elucidated from the concerted investigations throughout 800 MHz NMR spectroscopy, light scattering, atomic force microscopy along with molecular mechanics and dynamics. Some attempts of deciphering of the structural role that RG-II may play in the cell wall of growing plants are presented. .COPYRGT. 2003 Editions scientifiques et medicales Elsevier SAS and Societe francaise de biochimie et biologie moleculaire. All rights reserved.

L17 ANSWER 7 OF 42 MEDLINE on STN
ACCESSION NUMBER: 2002692062 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12452806
TITLE: Evaluation of meningococcal C oligosaccharide conjugate vaccines by size-exclusion chromatography/multi-angle laser light scattering.
AUTHOR: Jumel Kornelia; Ho Mei M; Bolgiano Barbara
CORPORATE SOURCE: National Centre for Macromolecular Hydrodynamics, School of Biosciences, University of Nottingham, Sutton Bonington Campus, Sutton Bonington, LE12 5RD, UK.
SOURCE: Biotechnology and applied biochemistry, (2002 Dec) 36 (Pt 3) 219-26.
Journal code: 8609465. ISSN: 0885-4513.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: (EVALUATION STUDIES)
Journal; Article; (JOURNAL ARTICLE)
(VALIDATION STUDIES)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200306
ENTRY DATE: Entered STN: 20021214
Last Updated on STN: 20030608
Entered Medline: 20030606
AB The mean molecular masses of three different meningococcal C saccharide (MenC)-**protein** conjugate vaccines and their constituent **proteins** were estimated using HPLC size-exclusion chromatography

(SEC) with multi-angle laser light scattering (MALLS) and refractive-index (RI) detection (SEC/MALLS). Chromatography of two CRM(197) conjugates (MenC-CRM(197)-A and MenC-CRM(197)-B) and one tetanus toxoid (TT) conjugate (MenC-TT) was performed in PBS, pH 7.4, on TSK-Gel (TosoHaas) analytical columns [CRM(197) is a non-catalytic cross-reacting mutant (CRM) of diphtheria toxin]. Analysis of the light-scattering signal measured at 18 angles simultaneously, using the RI signal as a measure of concentration, gave absolute weight-average-molecular-mass (M(w)) values for the CRM(197) conjugates as follows: MenC-CRM(197)-A, approximately 75,000 g x mol(-1) and MenC-CRM(197)-B, approximately 350,000 g x mol(-1), suggesting that MenC-CRM(197)-A is a monomer (one carrier **protein** per conjugate molecule), while MenC-CRM(197)-B is largely composed of conjugates containing three or four CRM(197) molecules. The MenC-TT conjugate eluted as a two-component system with (M(w)) of 1.63 x 10(6) and 395,000 g x mol(-1), suggesting that some **cross-linked** complexes contain up to six TT molecules. Comparison of results from MALLS/RI with those obtained using UV detection highlights the differences in size and relative **composition** of the various subpopulations of the MenC conjugates that can be obtained using different detection systems.

L17 ANSWER 8 OF 42 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 2002055770 EMBASE
TITLE: Smooth muscle cell adhesion on **crosslinked** hyaluronan gels.
AUTHOR: Ramamurthi A.; Vesely I.
CORPORATE SOURCE: I. Vesely, Department of Biomedical Engineering, Lerner Research Institute, Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, OH 44120, United States. vesely@bme.ri.ccf.org
SOURCE: Journal of Biomedical Materials Research, (2002) 60/1 (196-205).
Refs: 27
ISSN: 0021-9304 CODEN: JBMRBG
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 005 General Pathology and Pathological Anatomy
027 Biophysics, Bioengineering and Medical Instrumentation
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English

AB **Hyaluronic acid** (HA)-based polymers (hylans) are highly biocompatible and can be structurally modified to obtain desired mechanical properties. This study evaluated divinyl sulfone-**crosslinked** solid and particulate hylans as cellular scaffolds. These two hylan types differ in surface characteristics, mode of preparation, HA content, and extent of **crosslinking**. Neonatal rat aortic smooth muscle cells were cultured on hylan gels coated with matrix factors including collagen I, ECM gel, laminin, and fibronectin and on uncoated controls for ≤4 weeks. Cell attachment was sparse on uncoated controls but significantly enhanced on coated gels. Cell morphology was influenced by the identity of the matrix factors coated and the surface topography of the hylan gels. Cells attached to coated particulate gels appeared either highly spread (collagen, fibronectin) or irregularly shaped (ECM gel, laminin). Cells on laminin and fibronectin-coated solid gels were rounded and nonproliferative. Cells proliferated most rapidly on ECM gel-coated gels. The uneven surface of particulate gels induced more **protein** deposition and the

subsequent attachment and active proliferation of cells. This study shows that surface texturizing and subsequent surface treatment with matrix factors enhances cell attachment and proliferation of hylans. These results are useful toward developing bioengineered materials based on cell-hylan **composites**. .COPYRGT. 2002 John Wiley & Sons, Inc.

L17 ANSWER 9 OF 42 MEDLINE on STN
ACCESSION NUMBER: 2002113586 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11835176
TITLE: Smooth muscle cell adhesion on **crosslinked** hyaluronan gels.
AUTHOR: Ramamurthi Anand; Vesely Ivan
CORPORATE SOURCE: Department of Biomedical Engineering, ND20, Lerner Research Institute, The Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, Ohio 44120, USA.
SOURCE: Journal of biomedical materials research, (2002 Apr) 60 (1) 195-205.
Journal code: 0112726. ISSN: 0021-9304.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200205
ENTRY DATE: Entered STN: 20020216
Last Updated on STN: 20020515
Entered Medline: 20020514

AB **Hyaluronic acid** (HA)-based polymers (hylans) are highly biocompatible and can be structurally modified to obtain desired mechanical properties. This study evaluated divinyl sulfone-**crosslinked** solid and particulate hylans as cellular scaffolds. These two hylan types differ in surface characteristics, mode of preparation, HA content, and extent of **crosslinking**. Neonatal rat aortic smooth muscle cells were cultured on hylan gels coated with matrix factors including collagen I, ECM gel, laminin, and fibronectin and on uncoated controls for < or =4 weeks. Cell attachment was sparse on uncoated controls but significantly enhanced on coated gels. Cell morphology was influenced by the identity of the matrix factors coated and the surface topography of the hylan gels. Cells attached to coated particulate gels appeared either highly spread (collagen, fibronectin) or irregularly shaped (ECM gel, laminin). Cells on laminin and fibronectin-coated solid gels were rounded and nonproliferative. Cells proliferated most rapidly on ECM gel-coated gels. The uneven surface of particulate gels induced more **protein** deposition and the subsequent attachment and active proliferation of cells. This study shows that surface texturizing and subsequent surface treatment with matrix factors enhances cell attachment and proliferation of hylans. These results are useful toward developing bioengineered materials based on cell-hylan **composites**.

L17 ANSWER 10 OF 42 EMBASE
on STN
ACCESSION NUMBER: 2002134808 EMBASE
TITLE: Swelling behavior of **hyaluronic acid** and type II collagen hydrogels prepared by using conventional **crosslinking** and subsequent additional polymer interactions.
AUTHOR: Taguchi T.; Tanaka J.
CORPORATE SOURCE: T. Taguchi, Biomaterials Center, Natl. Institute for

Materials Sci., 1-1 Namiki, Tsukuba, Ibaraki 305-0044, Japan. TAGUCHI.Tetsushi@nims.go.jp
SOURCE: Journal of Biomaterials Science, Polymer Edition, (2002) 13/1 (43-52).
Refs: 23
ISSN: 0920-5063 CODEN: JBSEEA
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Polymer-polymer interactions, such as hydrophobic and electrostatic interactions, were introduced into covalently **crosslinked** **composite** matrices consisting of an anionic **polysaccharide** , **hyaluronic acid** (HyA) and a cationic polypeptide, type II collagen. The matrices were covalently **crosslinked** using a water soluble carbodiimide (WSC; 1-ethyl-3-(3-dimethyl aminopropyl) carbodiimide hydrochloride) and were immersed at different temperatures in excess water or 0.4 M NaCl aqueous solution, i.e. the optimal salt concentration to suppress polyion complex formation. Hydrophobic interaction was introduced in the matrices when the temperature was increased. Matrices with polymer-polymer interactions could be obtained when immersed in water at 37°C without any collagen denaturation. The molar ratios of [OH]/[COOH] and [NH(2)]/[COOH], and WSC concentration in precursor solutions of HyA-collagen **composite** matrices influenced the electrostatic interactions. The hydrophobic and electrostatic interactions in the matrix were maintained in water, even at low temperatures, while in salt solutions at elevated temperatures, these interactions were nullified.

L17 ANSWER 11 OF 42 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 2001-452935 [49] WPIDS
DOC. NO. CPI: C2001-136902
TITLE: Water-based polymer **composition** for production of e.g. paint comprises biopolymer obtained from mechanical thermoplastic processing of polysaccharide and/or protein, and synthetic polymer resin.
DERWENT CLASS: A18 A28 A82 A97 G02
INVENTOR(S): BONTINCK, D; COLPAERT, M; ROOSE, P
PATENT ASSIGNEE(S): (UNIO) UCB SA
COUNTRY COUNT: 95
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 1095977	A1	20010502	(200149)*	EN	14
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
AU 2001018543	A	20010508	(200149)		
WO 2001030905	A1	20010503	(200149)	EN	
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
KR 2002062735	A	20020729	(200308)		
CN 1391596	A	20030115	(200330)		
JP 2003513133	W	20030408	(200333)		34
MX 2002004230	A1	20030101	(200373)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 1095977	A1	EP 1999-121449	19991028
AU 2001018543	A	AU 2001-18543	20001025
WO 2001030905	A1	WO 2000-EP10503	20001028
KR 2002062735	A	KR 2002-705479	20020429
CN 1391596	A	CN 2000-815843	20001025
JP 2003513133	W	WO 2000-EP10503	20001028
		JP 2001-533893	20001028
MX 2002004230	A1	WO 2000-EP10503	20001028
		MX 2002-4230	20020426

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2001018543	A	Based on	WO 2001030905
JP 2003513133	W	Based on	WO 2001030905
MX 2002004230	A1	Based on	WO 2001030905

PRIORITY APPLN. INFO: EP 1999-121449 19991028
AN 2001-452935 [49] WPIDS
AB EP 1095977 A UPAB: 20010831
NOVELTY - A water-based polymer **composition** comprises a biopolymer and a synthetic polymer resin. The biopolymer is obtained from a mechanical thermoplastic processing of polysaccharide and/or protein using shear forces in the presence of a **crosslinking** agent. The synthetic polymer resin consists of a water-based hydrophilic resin and/or hydrophilic/hydrophobic resin.
USE - For the production of coatings e.g., paint and ink (claimed).
ADVANTAGE - The inventive **composition** have good storage stability. It can provide coatings with enhanced biodegradable character, and with fair properties e.g., adhesion, barrier, solvent and wet resistance, mechanical strength, applicability, durability, and film formation when applied to various types of substrates.
Dwg.0/0

L17 ANSWER 12 OF 42 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 2001-267113 [28] WPIDS
CROSS REFERENCE: 2000-319420 [27]
DOC. NO. NON-CPI: N2001-191058
DOC. NO. CPI: C2001-081077
TITLE: Production of a self-supporting layer or layer lying on a substrate comprises forming a pasty **composition** , converting the pasty **composition** into the required layer shape, vaporizing the solvent or swelling agent and solidifying.
DERWENT CLASS: A14 A21 A23 A85 G02 L03 S03 U12 X15 X16
INVENTOR(S): BIRKE, P; NEUMANN, G
PATENT ASSIGNEE(S): (FRAU) FRAUNHOFER GES FOERDERUNG ANGEWANDTEN
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 19964159	A1	20010222	(200128)*		12

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 19964159	A1 Div ex	DE 1999-19908532	19990228
		DE 1999-19964159	19990228

FILING DETAILS:

PATENT NO	KIND	PATENT NO
DE 19964159	A1 Add to	DE 19908532
	Div ex	DE 19908532

PRIORITY APPLN. INFO: DE 1998-19848255 19981020
AN 2001-267113 [28] WPIDS
CR 2000-319420 [27]
AB DE 19964159 A UPAB: 20010522
NOVELTY - Production of a self-supporting layer or layer lying on a substrate comprises forming a pasty **composition** consisting of a heterogeneous mixture of an organic polymer, its precursors or pre-polymers, a plasticizer and a solvent or swelling agent, and optionally a powdered solid; converting the pasty **composition** into the required layer shape; vaporizing the solvent or swelling agent and solidifying. The plasticizer is dissolved out of the solidified layer and the cavities produced are filled by dipping into an electrochemically active inorganic liquid which does not dissolve the matrix.
USE - Used in the production of primary batteries, accumulators, low temperature fuel cells, solar cells and electrochemical sensors.
ADVANTAGE - The layer has good conducting properties.
Dwg.0/3

L17 ANSWER 13 OF 42 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 2001135770 EMBASE
TITLE: Microencapsulation of theophylline in **composite** wall system consisting of whey **proteins** and lipids.
AUTHOR: Lee S.J.; Rosenberg M.
CORPORATE SOURCE: M. Rosenberg, Department of Food Science/Technol., University of California, Davis, CA 95616, United States. mrosenberg@ucdavis.edu
SOURCE: Journal of Microencapsulation, (2001) 18/3 (309-321). Refs: 36
ISSN: 0265-2048 CODEN: JOMIEF
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 037 Drug Literature Index
039 Pharmacy
048 Gastroenterology
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Theophylline was microencapsulated in **composite** whey **protein**-based wall systems containing different proportions of dispersed apolar filler, anhydrous milkfat. Wall emulsions exhibited uni-modal particle size distribution and had a mean particle size of 0.36-0.38 μm. Microcapsules were **cross-linked** by glutaraldehyde-saturated toluene via an organic phase. Spherical microcapsules ranging in diameter from 150 to larger than 700 μm were obtained and exhibited some surface cracks that could be attributed to the

fragile nature of a peripheral, highly **cross-linked** 'shell' layer around the capsules. Core content ranged from 46.9-56.6% (w/w) and filler content ranged from 12.0-33.4% (w/w). Core and filler retention during microencapsulation ranged from 84.9-96.9% and from 85.1-89.6%, respectively. Core retention was proportionally related to the proportion of filler embedded in the wall matrix. Core release into SGF and SIF was affected by microcapsule size, type of dissolution medium and wall **composition**. Rate of core release was inversely proportional to filler content of the wall matrix. This could be attributed to effects of filler content on diffusion through the wall matrix and probably on swelling properties of microcapsules. Results indicated that incorporation of apolar filler in wall matrix of whey **protein**-based capsules provided the means to enhance retention of a water-soluble core during the microencapsulation process and to decrease the rate of core release into aqueous dissolution media.

L17 ANSWER 14 OF 42 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 2001-168294 [17] WPIDS
DOC. NO. CPI: C2001-050164
TITLE: Solid aqueous gel for use in make-up products for skin, mucous membranes and keratin fibers, comprises hydrophilic gelling agent and at least starch or its derivatives.
DERWENT CLASS: A96 D21
INVENTOR(S): BARA, I
PATENT ASSIGNEE(S): (OREA) L'OREAL SA
COUNTRY COUNT: 94
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000078857	A1	20001228	(200117)*	FR	21
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
FR 2795081	A1	20001222	(200117)		
AU 2000064475	A	20010109	(200122)		
BR 2000006824	A	20010605	(200138)		
EP 1112320	A1	20010704	(200138)	FR	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
KR 2001072740	A	20010731	(200209)		
JP 2003503316	W	20030128	(200309)		26
MX 2001001680	A1	20020501	(200368)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000078857	A1	WO 2000-FR1632	20000613
FR 2795081	A1	FR 1999-7770	19990618
AU 2000064475	A	AU 2000-64475	20000613
BR 2000006824	A	BR 2000-6824	20000613
		WO 2000-FR1632	20000613
EP 1112320	A1	EP 2000-951580	20000613
		WO 2000-FR1632	20000613
KR 2001072740	A	KR 2001-702061	20010217

JP 2003503316 W	WO 2000-FR1632	20000613
	JP 2001-505611	20000613
MX 2001001680 A1	WO 2000-FR1632	20000613
	MX 2001-1680	20010214

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2000064475 A	Based on		WO 2000078857
BR 2000006824 A	Based on		WO 2000078857
EP 1112320	A1	Based on	WO 2000078857
JP 2003503316 W	Based on		WO 2000078857
MX 2001001680 A1	Based on		WO 2000078857

PRIORITY APPLN. INFO: FR 1999-7770 19990618
AN 2001-168294 [17] WPIDS
AB WO 200078857 A UPAB: 20010328
NOVELTY - The gel comprises at least one hydrophilic gelling agent and at least starch or its derivatives

DETAILED DESCRIPTION - A solid aqueous gel comprises:

(i) at least one hydrophilic gelling agent; and

(ii) at least one of starch or its derivatives.

It has a hardness defined by critical breaking strength 5-50 g, at ambient temperature, after penetration by stainless steel mobile of 2 mm diameter into the gel matrix of thickness of 1 mm, at speed 1 mm/sec and withdrawing this mobile at speed 2 mm/sec.

Hydrophilic gelling agent is present in amount up to 20 (especially 0.2-10) weight% per total weight of gel, and is selected from **polysaccharides**, **protein** derivatives, synthesis or hemisynthesis gels of polyester type, especially sulfonic, polyacrylates or polymethacrylates, and their derivatives.

The starch component is selected from maize, rice, manioc, potato, wheat, pea and millet starch, natural or modified, and is present in amount 0.3-20 (preferably 1-10) weight%.

The gel preferably also contains powdered phase comprising pigment and/or mother-of-pearl and/or filler. Pigments can be of mineral or organic type while the mother-of-pearl can be natural, of mica/titania type, iron oxide, natural pearl pigment or bismuth oxychloride as well as colored mica titanium, and they are present in gel in amount up to 40 (preferably 0.1-30) weight% each. Fillers can be of mineral, organic or polymeric type, or they may be in form of glass or ceramic microcapsules, and they are present in gel in amount up to 60 (preferably 0.1-40) weight% per total weight of gel.

The gel may also contain salt, water-soluble colorant, cosmetically or physiologically acceptable medium, and solvent, as well as up to 99.8 (preferably 20-99) weight% of water, and additional compounds selected from antioxidants, essential oils, preservatives, lipophilic or hydrophilic active substances of cosmetic or pharmaceutical type, hydration agents, vitamins, essential fatty acids, sphingolipids, self-tanning compounds, solar filters, fragrances and their mixtures.

INDEPENDENT CLAIMS are also included for:

(1) a solid **composition**, with a continuous aqueous phase, comprising a gel as above;

(2) a cosmetic make-up product, comprising a gel as above and/or a **composition** as above, for skin, keratin fibers and mucous membranes; and

(3) a process of make-up of skin and/or keratin fibres, comprising application of a gel and/or a **composition** and/or a product as above.

USE - In **compositions** and products such as body make-up, foundation, eye-shadow, blusher, concealer, lipstick, lip-liner, mascara, eye-liner or hair strand make-up/dyeing stick
Dwg.0/0

L17 ANSWER 15 OF 42 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 2001-041105 [05] WPIDS
DOC. NO. CPI: C2001-011970
TITLE: Pharmaceutical **composition** useful for stimulating epithelial cell proliferation and basal keratinocytes for wound healing comprises keratinocyte growth factor-2, in liquid or lyophilized forms.
DERWENT CLASS: A96 B04
INVENTOR(S): CHOPRA, A; GENTZ, R L; KAUSHAL, P; KHAN, F; SPITZNAGEL, T; UNSWORTH, E
PATENT ASSIGNEE(S): (CHOP-I) CHOPRA A; (GENT-I) GENTZ R L; (HUMA-N) HUMAN GENOME SCI INC; (KAUS-I) KAUSHAL P; (KHAN-I) KHAN F; (SPIT-I) SPITZNAGEL T; (UNSW-I) UNSWORTH E
COUNTRY COUNT: 94
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000072872	A1	20001207	(200105)*	EN	101
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
AU 2000055932	A	20001218	(200118)		
EP 1196187	A1	20020417	(200233)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
KR 2002010920	A	20020206	(200255)		
CN 1359299	A	20020717	(200268)		
JP 2003500456	W	20030107	(200314)		108
MX 2001012387	A1	20020901	(200370)		
NZ 516060	A	20031219	(200404)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000072872	A1	WO 2000-US15186	20000602
AU 2000055932	A	AU 2000-55932	20000602
EP 1196187	A1	EP 2000-941186	20000602
		WO 2000-US15186	20000602
KR 2002010920	A	KR 2001-715493	20011201
CN 1359299	A	CN 2000-809802	20000602
JP 2003500456	W	JP 2000-620980	20000602
		WO 2000-US15186	20000602
MX 2001012387	A1	WO 2000-US15186	20000602
		MX 2001-12387	20011130
NZ 516060	A	NZ 2000-516060	20000602
		WO 2000-US15186	20000602

FILING DETAILS:

PATENT NO	KIND	PATENT NO

AU 2000055932	A	Based on	WO 2000072872
EP 1196187	A1	Based on	WO 2000072872
JP 2003500456	W	Based on	WO 2000072872
MX 2001012387	A1	Based on	WO 2000072872
NZ 516060	A	Div in	NZ 527291
		Based on	WO 2000072872

PRIORITY APPLN. INFO: US 1999-160913P 19991022; US 1999-137448P 19990602

AN 2001-041105 [05] WPIDS

AB WO 200072872 A UPAB: 20011129

NOVELTY - Pharmaceutical **composition** (I) comprises:

(1) 0.02-40 mg/ml (w/v) keratinocyte growth factor-2 (KGF-2) polypeptide;

(2) buffer having buffering capacity of pH 5-8 at 5-50 mM;

(3) a diluent to bring the **composition** to a designated volume; and

(4) a preservative such as m-cresol, chlorobutanol, or a mixture of methyl paraben and propyl paraben or their reaction products.

ACTIVITY - Vulnerary; antiinflammatory; antipsoriatic; antidiabetic; ophthalmological; hemostatic. No biological data is given.

MECHANISM OF ACTION - Soft tissue growth or regeneration promoter; keratinocyte cell growth and proliferation stimulator.

USE - Used for promoting or accelerating soft tissue growth, for wound healing or treating mucocytis or inflammatory bowel disease. The KGF-2 polypeptides stimulate keratinocyte cell growth and proliferation and (I) is used to stimulate epithelial cell proliferation and basal keratinocytes for wound healing and to stimulate hair follicle production and healing of dermal wounds. These wounds may be of superficial nature or may be deep and involve damage of the dermis and the epidermis of skin. (I) Also promotes the healing of anastomotic and other wounds caused by surgical procedures in individuals which both heal wounds at a normal rate and are healing impaired. (I) may also be used to stimulate differentiation of cells, for example muscle cells, nervous tissue, prostate cells and lung cells.

(I) Is clinically useful in stimulating wound healing of wounds including surgical wounds, excisional wounds, deep wounds involving damage of the dermis and epidermis, eye tissue wounds, dental tissue wounds, oral cavity wounds, diabetic ulcers, dermal ulcers, cubitus ulcers, arterial ulcers, venous stasis ulcers, and burns resulting from heat exposure to extreme temperatures of heat or cold, or exposure to chemicals. (I) is useful for promoting the healing of wounds associated with ischemia and ischemic injury, e.g. chronic venous leg ulcers caused by an impairment of venous circulatory system return and/or insufficiency etc. The KGF-2 polypeptides in the formulation are used to stimulate epithelial cell proliferation and basal keratinocytes for the purposes of treating burns and skin defects such as psoriasis and epidermolysis bullosa, to increase the adherence of skin grafts to a wound bed and to stimulate re-epithelialization from the wound bed to reduce the side effects of gut toxicity that result from radiation, chemotherapy treatments or viral infections and to treat diseases and conditions of the liver, lung, kidney.

KGF-2 can be used to treat inflammatory bowel diseases, diabetes, thrombocytopenia, hypofibrinogenemia, hypoalbuminemia, hemorrhagic cystitis, xerostomia, keratoconjunctivitis sicca. KGF-2 can also be used to stimulate the epithelial cells of the salivary glands, lacrimal glands and stimulating the epithelial cells of the salivary glands, lacrimal glands and stimulating re-epithelialization of the sinuses and the growth of nasal mucosa.

ADVANTAGE - The **composition** is stable over prolonged periods of storage, has increased pharmacological activity or effectiveness of the polypeptide and/or allow facile application or administration of the polypeptide in therapeutic regimens.
Dwg.0/5

L17 ANSWER 16 OF 42 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 2000-565372 [52] WPIDS
DOC. NO. NON-CPI: N2000-417592
DOC. NO. CPI: C2000-168419
TITLE: Hyaluronic acid gel **composition** comprising hyaluronic acid and polymer having undergone no modification with chemical **crosslinking** or modifying agent useful e.g. as wound dressing.
DERWENT CLASS: A11 A96 B04 D22 P34
INVENTOR(S): ARAI, K; HASHIMOTO, M; HIMEDA, Y; MIYATA, Y; UMEDA, T; YAMAMOTO, O
PATENT ASSIGNEE(S): (ELED) DENKI KAGAKU KOGYO KK
COUNTRY COUNT: 90
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000049084	A1	20000824	(200052)*	JA	48
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
AU 2000025744	A	20000904	(200103)		
EP 1174463	A1	20020123	(200214)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
KR 2001102231	A	20011115	(200231)		
JP 2000599818	X	20020604	(200239)		
CN 1340080	A	20020313	(200245)		
NZ 513517	A	20030829	(200365)		
US 6638538	B1	20031028	(200372)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000049084	A1	WO 2000-JP946	20000218
AU 2000025744	A	AU 2000-25744	20000218
EP 1174463	A1	EP 2000-904045	20000218
		WO 2000-JP946	20000218
KR 2001102231	A	KR 2001-710474	20010817
JP 2000599818	X	JP 2000-599818	20000218
		WO 2000-JP946	20000218
CN 1340080	A	CN 2000-803894	20000218
NZ 513517	A	NZ 2000-513517	20000218
		WO 2000-JP946	20000218
US 6638538	B1	WO 2000-JP946	20000218
		US 2001-913718	20010927

FILING DETAILS:

PATENT NO	KIND	PATENT NO

AU 2000025744	A	Based on	WO 2000049084
EP 1174463	A1	Based on	WO 2000049084
JP 2000599818	X	Based on	WO 2000049084
NZ 513517	A	Based on	WO 2000049084
US 6638538	B1	Based on	WO 2000049084

PRIORITY APPLN. INFO: JP 1999-318579 19991109; JP 1999-42371 19990219

AN 2000-565372 [52] WPIDS

AB WO 200049084 A UPAB: 20001018

NOVELTY - Hyaluronic acid gel **composition** comprises hyaluronic acid and a polymer, having undergone no modification with a chemical **crosslinking** agent or a chemical modifying agent. The hyaluronic acid has a dissolution when immersed in a neutral aqueous solution for 12 hours at 37 deg. C of 50% or less.

DETAILED DESCRIPTION - Hyaluronic acid gel **composition** comprises hyaluronic acid and a polymer, having undergone no modification with a chemical **crosslinking** agent or a chemical modifying agent. The hyaluronic acid has a dissolution when immersed in a neutral aqueous solution for 12 hours at 37 deg. C of 50% or less.

INDEPENDENT CLAIMS are also included for the following:

(1) a medical material and a wound covering material comprising the gel **composition**; and

(2) a medical material comprising a hyaluronic acid gel **composition** irradiated with or injected with gamma rays, electron beam, plasma or EOG (not defined).

USE - The gel **composition** is useful for medical materials such as wound covering materials or for administering active agents.

ADVANTAGE - The gel **composition** gives good protection of wounds and does not dissolve in water or bodily fluids.

Dwg.0/0

L17 ANSWER 17 OF 42 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN

ACCESSION NUMBER: 2001-026110 [04] WPIDS

DOC. NO. NON-CPI: N2001-020346

DOC. NO. CPI: C2001-008214

TITLE: Paste, for producing electrode and-or electrolyte layers of batteries, capacitors, solar cells or electrochromic displays, comprises an electrochemically activatable inorganic nanocrystalline powder in a polymer matrix.

DERWENT CLASS: A85 L03 P81 U11 U12 U14 V01 X15 X16

INVENTOR(S): BIRKE, P; NEUMANN, G

PATENT ASSIGNEE(S): (FRAU) FRAUNHOFER GES FOERDERUNG ANGEWANDTEN

COUNTRY COUNT: 91

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 19948548	A1	20001026	(200104)*		14
WO 2000063984	A2	20001026	(200104)	GE	

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW

W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2000053922	A	20001102	(200107)	
BR 2000009820	A	20020115	(200214)	
EP 1194963	A2	20020410	(200232)	GE

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
CN 1351766 A 20020529 (200258)
KR 2002020691 A 20020315 (200263)
JP 2002542589 W 20021210 (200301) 43

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 19948548	A1	DE 1999-19948548	19991008
WO 2000063984	A2	WO 2000-EP3541	20000418
AU 2000053922	A	AU 2000-53922	20000418
BR 2000009820	A	BR 2000-9820	20000418
		WO 2000-EP3541	20000418
EP 1194963	A2	EP 2000-938604	20000418
		WO 2000-EP3541	20000418
CN 1351766	A	CN 2000-806409	20000418
KR 2002020691	A	KR 2001-713305	20011019
JP 2002542589	W	JP 2000-613016	20000418
		WO 2000-EP3541	20000418

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2000053922	A	Based on	WO 2000063984
BR 2000009820	A	Based on	WO 2000063984
EP 1194963	A2	Based on	WO 2000063984
JP 2002542589	W	Based on	WO 2000063984

PRIORITY APPLN. INFO: DE 1999-19917581 19990419
AN 2001-026110 [04] WPIDS
AB DE 19948548 A UPAB: 20010118
NOVELTY - An electrochemical component paste, comprising an organic polymer, precursor or pre-polymer matrix and an insoluble electrochemically activatable inorganic nanocrystalline powder, is new.

DETAILED DESCRIPTION - A paste, useful in electrochemical components, comprises (by weight) (A) 0-70% organic polymer, precursor or pre-polymer matrix and (B) 30-100% electrochemically activatable insoluble solid inorganic material which is (partially) in the form of a nanocrystalline powder and which cannot be used as an electrode material if the matrix is absent. INDEPENDENT CLAIMS are also included for the following: (i) a self-supporting or substrate-supported layer comprising a heterogeneous mixture of the above paste constituents; (ii) a self-supporting or substrate-supported layer **composite** with electrochemical properties and comprising electrode and electrolyte layers, at least one of which comprises a heterogeneous mixture of the above paste constituents; (iii) a rechargeable electrochemical cell in thick film technology, comprising the above layer **composite**; (iv) production of the above paste by intimate mixing of constituent (A) with a solvent or swelling agent for constituent (A) and with constituent (B); (v) production of the above paste by intimate mixing of a **cross-linkable** pre-polymer with constituent (B); (vi) production of the above paste by intimate mixing of constituent (A) with a plasticizer and with constituent (B), addition of a solvent for the plasticizer, washing out of the dissolved plasticizer from the material and optionally removing the solvent; (vii) production of the above self-supporting or supported layer by forming a layer from a paste containing a **cross-linkable** polymer or pre-polymer as the matrix (A) and

cross-linking the polymer constituent photochemically by electron irradiation, by heating or by immersing in a chemical **cross-linking** agent; and (viii) production of the above self-supporting or substrate-supported layer **composite** by successive application of pastes onto a substrate, preferably by printing, and then converting the layers to their final solid state.

USE - For production of electrode and electrolyte layers or layer **composites** for batteries, accumulators, capacitors ('supercaps'), solar cells, electrochromic display elements and the like.

ADVANTAGE - Compared with the paste described in DE19839217.6, the new paste contains the electrochemically activatable material in a nanocrystalline powder state to provide increased ion mobility improved electrical contact so that the layer has very good electronic and ionic conductivity.

DESCRIPTION OF DRAWING(S) - The drawing shows a layer **composite** with electrochemical properties in accordance with the invention.

Collector electrodes 1, 7
Intermediate tapes 2, 6
Electrodes 3, 5
Electrolyte 4
Dwg.1/3

L17 ANSWER 18 OF 42 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 2001-041806 [06] WPIDS
DOC. NO. CPI: C2001-012221
TITLE: New hybrid polymer **composition**, useful as carrier for controlled drug release, comprising water-soluble polymers and silicon oxide units bonded via polymerizable groups.
DERWENT CLASS: A18 A96 B07 C07
INVENTOR(S): PIETRAS, U; SCHABRODT, H; WOITSCHIG, G
PATENT ASSIGNEE(S): (FEWC-N) FEW CHEM GMBH
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 19922368	A1	20001116	(200106)*		5

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 19922368	A1	DE 1999-19922368	19990514

PRIORITY APPLN. INFO: DE 1999-19922368 19990514
AN 2001-041806 [06] WPIDS
AB DE 19922368 A UPAB: 20010126
NOVELTY - A new polymer **composition** (I) consists of water-soluble polymers and silicon oxide units, bonded together via polymerizable groups.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for the preparation of (I), by treating an aqueous solution of a polymer (II) with alkoxysilanes (III) (or their hydrolyzates or derived silicon oxide sols), where both components contain polymerizable groups.

USE - The hybrid polymers (I) are used (especially in particle, matrix or encapsulating material form) as a carrier system for biologically active agents, especially as a carrier for controlled release

of pharmaceutical drugs (all claimed). Polymeric drug carrier systems are useful in human or veterinary medical applications, e.g. in:

(i) bonding psychic drugs ((e.g. dopamine) to polymeric nanoparticles which can cross the blood-brain barrier;

(ii) protective encapsulation and controlled release of water-soluble peptide, protein or gene therapeutic drugs (including hormones, insulin and vaccines);

(iii) bonding endothelial growth factors to polymeric wound dressings to accelerate tissue regeneration;

(iv) local therapy of eye diseases, e.g. using slow-release nanoparticles containing pilocarpine;

(v) production of subcutaneously or intramuscularly administered mini-implants for long-term release of hormones or hormone production regulators;

(vi) targeted delivery of cytostatic agents to tumor cells; or

(vii) transporting peptide or protein to the colon for targeted release or treatment of localized disorders.

ADVANTAGE - (I) are hybrids of biocompatible polymers and biologically inert silicon oxide molecules, and are widely applicable and free of side effects. They have high chemical, physical, mechanical and thermal stability. The rate of degradation, and thus the rate of drug release, is reproducible and can be controlled as desired via the degree of intermolecular **crosslinking**, with no problems due to charge-dependent properties (as with natural polymer carriers).

Dwg.0/0

L17 ANSWER 19 OF 42 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 2001-000448 [01] WPIDS
DOC. NO. CPI: C2001-000120
TITLE: Hybrid polymer **composition**, useful as drug carrier providing controllable and reproducible release, is obtained by **crosslinking** water-soluble polymer with titanate or zirconate in presence of silica component.
DERWENT CLASS: A96 B04 B07 D22
INVENTOR(S): PIETRAS, U; SCHABRODT, H; WOITSCHIG, G
PATENT ASSIGNEE(S): (FEWC-N) FEW CHEM GMBH WOLFEN
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 19918627	A1	20001026	(200101)*		5

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 19918627	A1	DE 1999-19918627	19990423

PRIORITY APPLN. INFO: DE 1999-19918627 19990423
AN 2001-000448 [01] WPIDS
AB DE 19918627 A UPAB: 20011206
NOVELTY - A novel polymer **composition** (I), containing water-soluble polymers and silicon oxide components, is **crosslinked** using a titanate or zirconate.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for:

(i) the preparation of (I) by treating an aqueous polymer solution with organic titanates or organic zirconates and alkoxysilane hydrolyzates

(or derived silicon oxide sols); and

(ii) a method for storing biologically active agents in a biocompatible medium consisting of a hybrid polymer **crosslinked** by organic titanates or organic zirconates in the presence of silicon oxide components, where the hybrid polymer is obtained by reaction of a water-soluble polymer in a solid or liquid phase with organic titanates or organic zirconates in the presence of alkoxysilane hydrolyzates (or derived silicon oxide sols).

USE - The hybrid polymers (I) are useful as carrier systems for the controlled release of biologically active agents, specifically drugs (claimed). (I) are especially used as carriers (preferably in the form of matrices or encapsulating agents) for the retarded or controlled release of drugs in human or veterinary medicine, e.g. for binding psychic drugs (such as dopamine) to polymeric nanoparticles to cross the blood-brain barrier; encapsulating water-soluble peptides, proteins (e.g. hormones, insulin or vaccines) or gene therapeutic agents for protection and controlled release; binding endothelial growth factors to polymeric wound dressings to accelerate tissue regeneration; local therapy of ocular diseases, e.g. using nanoparticle dispersions or microemulsions for continuous slow release of pilocarpine; mini-implants matrices having a depot effect for slow release of hormones or hormone production inducers; targeted delivery of cytostatic agents to tumors; and targeted transport of drugs to the colon. Possible non-medical applications include the production of functional layers or coatings.

ADVANTAGE - (I) are biocompatible and free of side-effects; have high chemical, physical, mechanical and thermal stability; and have reproducible degradation and drug release properties. The drug release kinetics are readily controlled for particular applications by varying the degree of **crosslinking**. The properties are not charge-dependent.

Dwg.0/0

L17 ANSWER 20 OF 42 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN

ACCESSION NUMBER: 2000-319420 [28] WPIDS
CROSS REFERENCE: 2001-267113 [28]
DOC. NO. NON-CPI: N2000-239649
DOC. NO. CPI: C2000-097031
TITLE: Paste material for electrochemical components for batteries, fuel cells, solar cells or sensors comprises mixture of polymer matrix, electrochemically activatable inorganic liquid and optional inert powder.
DERWENT CLASS: A85 J04 L03 S03 U12 X16
INVENTOR(S): BIRKE, P; NEUMANN, G
PATENT ASSIGNEE(S): (FRAU) FRAUNHOFER GES FOERDERUNG ANGEWANDTEN
COUNTRY COUNT: 89
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 19908532	A1	20000427	(200028)*		12
WO 2000024068	A1	20000427	(200029)	GE	

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW

W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 9964732	A	20000508	(200037)		
BR 9914619	A	20010703	(200141)		
DE 19908532	C2	20010823	(200148)		
EP 1135814	A1	20010926	(200157)	GE	

R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
KR 2001080177 A 20010822 (200213)
CN 1324501 A 20011128 (200219)
JP 2002528863 W 20020903 (200273) 36

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 19908532	A1	DE 1999-19908532	19990228
WO 2000024068	A1	WO 1999-EP7855	19991015
AU 9964732	A	AU 1999-64732	19991015
BR 9914619	A	BR 1999-14619	19991015
		WO 1999-EP7855	19991015
DE 19908532	C2	DE 1999-19908532	19990228
EP 1135814	A1	EP 1999-952592	19991015
		WO 1999-EP7855	19991015
KR 2001080177	A	KR 2001-704756	20010416
CN 1324501	A	CN 1999-812375	19991015
JP 2002528863	W	WO 1999-EP7855	19991015
		JP 2000-577721	19991015

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9964732	A	Based on	WO 2000024068
BR 9914619	A	Based on	WO 2000024068
DE 19908532	C2	Div in	DE 19964159
EP 1135814	A1	Based on	WO 2000024068
JP 2002528863	W	Based on	WO 2000024068

PRIORITY APPLN. INFO: DE 1998-19848255 19981020
AN 2000-319420 [28] WPIDS
CR 2001-267113 [28]
AB DE 19908532 A UPAB: 20021113
NOVELTY - Paste material for use in electrochemical components comprises a heterogeneous mixture of (A) a matrix containing organic polymer(s) or their precursor(s) or prepolymer(s), (B) electrochemically activatable, essentially inorganic liquid which is essentially a non-solvent for (A) and optionally (C) a solid powder which is inert towards (B).

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for (a) a self-supporting layer or a layer on a substrate, comprising a heterogeneous mixture of a polymer matrix as in (A), liquid (B) and optionally solid (C); (b) a laminate with electrical properties, comprising (1) a flexible layer containing an organic polymer and a suitable positive electrode material, (2) a layer as in (a), in which the liquid (B) is a substance with electrolyte properties and (3) a flexible layer containing an organic polymer and a negative electrode material; (c) a similar laminate comprising (1) a layer as in (a) in which liquid (B) is a material suitable for use as a cathode or an anode, (2) a flexible layer containing solid electrolytes embedded in an organic polymer matrix and (3) a flexible layer containing liquid or solid electrode material embedded in a polymer matrix, which can act as counter-electrode for layer (1); (d) a process for the production of paste material as above by mixing a **crosslinkable** prepolymer with components (B) and optionally (C); (e) another process in which (A) is mixed with a plasticizers and optionally powder (C), the plasticizers is leached out with a suitable solvent, the solvent is removed and liquid (B) is then added; (f) a process for the production of layers as in (a) from a paste in which

matrix (A) consists of a polymer or prepolymer which is then **crosslinked** by irradiation (with light or electron beam radiation), heating or immersion in chemical **crosslinking** agents; (g) another process for the production of layers (a), in which a paste is made from (A), a plasticizer, solvent or swelling agent and optionally (C), the paste is converted into the required layer form, solidified by evaporation of the solvent etc., washed with a solvent to remove the plasticizer and immersed in liquid (B) so as to fill the pores thus formed; (h) a process for the production of laminates as in (b), in which the paste materials for each layer are applied to a substrate, preferably by a compression method, and the layers are then converted into their final compacted state.

USE - Laminates based on this material are used in primary, secondary or decomposition batteries, preferably with layer thicknesses of 10 microns to 2 mm; layers based on this material are also used in low temperature fuel cells, solar cells or electrochemical sensors, especially sensors for moisture measurement (claimed).

ADVANTAGE - Paste material which already contains conductors (especially electrolytes or at least one electrode) in liquid form, suitable for the production of electrochemically activatable layers in ready-to-use electrochemical components for a wide range of batteries and other products. These components, preferably in the form of film laminates, show very good conductive properties and optionally high flexibility; they cannot run out and therefore eliminate the need for sealed housings.

DESCRIPTION OF DRAWING(S) - Charge-discharge curve (voltage vs. time) for an electrochemical component with the layer sequence: conducting electrode/spacer tape (thin plastic film)/electrode/electrolyte/electrode/ spacer tape/conducting electrode, with LiAlCl4/SO2 as electrolyte.
Dwg.3/3

L17 ANSWER 21 OF 42 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 2000-247264 [22] WPIDS
DOC. NO. NON-CPI: N2000-184978
DOC. NO. CPI: C2000-074959
TITLE: Paste for use in electrochemical devices comprises an organic polymer matrix and an inorganic electrochemically activated solid material.
DERWENT CLASS: A14 A28 A85 L03 P73 X12 X16
INVENTOR(S): BIRKE, P; NEUMANN, G
PATENT ASSIGNEE(S): (FRAU) FRAUNHOFER GES FOERDERUNG ANGEWANDTEN
COUNTRY COUNT: 86
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 19839217	A1	20000309	(200022)*		12
WO 2000013249	A1	20000309	(200022)	GE	
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW					
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW					
AU 9958559	A	20000321	(200031)		
DE 19839217	C2	20010208	(200109)		
BR 9913268	A	20010515	(200130)		
EP 1108271	A1	20010620	(200135)	GE	
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
CN 1317159	A	20011010	(200207)		

KR 2001082182 A 20010829 (200215)
JP 2002528849 W 20020903 (200273) 41
TW 550597 A 20030901 (200413)
US 6706441 B1 20040316 (200420)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 19839217	A1	DE 1998-19839217	19980828
WO 2000013249	A1	WO 1999-EP6313	19990827
AU 9958559	A	AU 1999-58559	19990827
DE 19839217	C2	DE 1998-19839217	19980828
BR 9913268	A	BR 1999-13268	19990827
		WO 1999-EP6313	19990827
EP 1108271	A1	EP 1999-946046	19990827
		WO 1999-EP6313	19990827
CN 1317159	A	CN 1999-810491	19990827
KR 2001082182	A	KR 2001-702585	20010228
JP 2002528849	W	WO 1999-EP6313	19990827
		JP 2000-568135	19990827
TW 550597	A	TW 1999-114810	19990830
US 6706441	B1	WO 1999-EP6313	19990827
		US 2001-786595	20010413

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9958559	A	Based on	WO 2000013249
BR 9913268	A	Based on	WO 2000013249
EP 1108271	A1	Based on	WO 2000013249
JP 2002528849	W	Based on	WO 2000013249
US 6706441	B1	Based on	WO 2000013249

PRIORITY APPLN. INFO: DE 1998-19839217 19980828
AN 2000-247264 [22] WPIDS
AB DE 19839217 A UPAB: 20000508
NOVELTY - A paste for use in electrochemical devices comprises an organic polymer matrix and an inorganic electrochemically activated solid material.

DETAILED DESCRIPTION - A paste(I) for use in electrochemical devices comprises a mixture of (A) a matrix consisting of an organic polymer, its precursors or prepolymer and (B) an electrochemically activated inorganic solid material that is insoluble in the matrix whereby either (a) (I) consists of at least 60 volume% (B) and (B) is an electrode material and is incorporated into (A) without the addition of a solvent or swelling agent and/or (b) (I) consists of at least 60 volume % (B) and (B) is producible as an electrode material and is incorporated into (A) containing a plasticizer which is removed using an appropriate solvent and/or (c) (I) additionally contains a further ionic and/or electronic conductor (C) that is present between (A) and (B) as a thin layer.

INDEPENDENT CLAIMS are included for:

(i) a layer (II) consisting of (I) that is either self supporting or applied to a substrate;

(ii) a laminate (III) having electrochemical properties and comprising a layer of (I) containing (B) that is suitable as a positive electrode, a layer of (I) containing (B) that is suitable as a solid electrolyte and a layer of (I) containing (B) that is suitable as a negative electrode;

(iii) a rechargeable electrochemical cell comprising the laminate;
(iv) a process for the production of (I) by the intimate mixing of (A) and (B);
(v) (v) a process for the production of the self supporting layer (II) by **cross-linking** the polymer components photochemically, by electron beam, by heat or by dipping the layer in a chemical **cross-linking** agent.
USE - The paste (I) is useful for the construction of batteries and electrochromic devices.
ADVANTAGE - The paste (I) produces a flexible layer with good ionic and/or electronic conductivity.
DESCRIPTION OF DRAWING(S) - The drawing shows a perspective view of the arrangement.
feeder electrode 1
intermediate tape 2
electrode 3
electrolyte 4
electrode 5
intermediate tape 6
feeder electrode 7
Dwg.1/3

L17 ANSWER 22 OF 42 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 2000-196327 [18] WPIDS
DOC. NO. CPI: C2000-061041
TITLE: **Composition** containing biocompatible, water-soluble polymer and covalently bound silicon building blocks, useful for controlled release of pharmaceuticals, nutrients and cosmetics.
DERWENT CLASS: A11 A96 B07 D21
INVENTOR(S): PIETRAS, U; ROTH, C; WOITSCHIG, G
PATENT ASSIGNEE(S): (FEWC-N) FEW CHEM GMBH WOLFEN CHEMIEPARK BITTERFE; (FEWC-N) FEW CHEM GMBH WOLFEN; (UYBE-N) UNIV FREIEN BERLIN
COUNTRY COUNT: 25
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 19837234	A1	20000224	(200018)*		5
EP 982348	A1	20000301	(200018)	GE	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
EP 982348	B1	20031126	(200402)	GE	
R: CH ES FR GB IE IT LI SE					

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 19837234	A1	DE 1998-19837234	19980817
EP 982348	A1	EP 1999-116059	19990816
EP 982348	B1	EP 1999-116059	19990816

PRIORITY APPLN. INFO: DE 1998-19837234 19980817
AN 2000-196327 [18] WPIDS
AB DE 19837234 A UPAB: 20000412
NOVELTY - A polymer **composition** for controlled release of pharmaceuticals, nutrients and cosmetics contains a biocompatible,

water-soluble polymer and covalently bound silicon building blocks.

DETAILED DESCRIPTION - A polymer **composition** is claimed, which contains a water-soluble polymer and covalently bound silicon building blocks. INDEPENDENT CLAIMS are also included for preparation of the **composition**, and for a method of depositing biologically active agents in biocompatible media.

USE - As a biocompatible carrier for the release of pharmaceuticals, cosmetics and nutrients. Examples of pharmaceutical applications include: as nanoparticulate carriers for the transport of psychopharmaceuticals (e.g. dopamine) across the blood-brain barrier; encapsulation of peptides, proteins (e.g. hormones, insulin or vaccines) or gene therapy agents to prevent decomposition by stomach acids when administered orally; to encapsulate endothelial growth factors in the preparation of wound healing agents; for the topical therapy of eye disorders (e.g. using pilocarpine); for the preparation of mini-implants for administering hormones; for the targeting of tumors; and to aid colon-specific release of peptides and proteins to treat diseases that are localized in that area.

ADVANTAGE - Combination of biocompatible polymers with inorganic silicon oxide gives hybrid polymers whose release properties can be controlled in pre-defined, reproducible ways and which have a high chemical, mechanical and thermal stability. The use of **crosslinking** agents and hardeners can also be reduced or eliminated altogether.

Dwg.0/0

L17 ANSWER 23 OF 42 MEDLINE on STN

ACCESSION NUMBER: 2001128095 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11103080
TITLE: Improvement of Schwann cell attachment and proliferation on modified **hyaluronic acid** strands by polylysine.
AUTHOR: Hu M; Sabelman E E; Tsai C; Tan J; Hentz V R
CORPORATE SOURCE: Functional Restoration Department, Stanford University, Medical School, Stanford, California, USA.. minhu@hotmail.com
SOURCE: Tissue engineering, (2000 Dec) 6 (6) 585-93. Journal code: 9505538. ISSN: 1076-3279.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200103
ENTRY DATE: Entered STN: 20010404
Last Updated on STN: 20010404
Entered Medline: 20010301

AB **Hyaluronic acid** (HyA) has the intrinsic ability to promote cell proliferation and reduce scar formation. However, the clinical use of HyA has so far been limited because of its water solubility and nonadhesive characteristics. Increasing interest in HyA as a clinically useful biomaterial has prompted our study of altering HyA's physical properties to render it a potential component of nerve grafts. In this study, strands of HyA were **cross-linked** by glutaraldehyde (Glut), coated with polylysine, and then inoculated with Schwann cells (SCs). Results in vivo and in vitro demonstrated that **cross-linked** HyA strands were water insoluble and thus less biodegradable. Poly-D-lysine-resurfaced strands showed significant SC attachment of 350-400 cells/mm(2), compared to uncoated controls (0-10 cells/mm(2), $p < 0.01$). Fibroblast control groups showed an attachment of 40-100 cells/mm(2) on coated strands. Immunostaining for proliferating cells showed SCs as and fibroblasts as +. Cells neither adhered to nor

proliferated on the modified HyA strands that were not resurfaced. The results suggest that polylysine promotes SC attachment and proliferation to glutaraldehyde-**cross-linked** HyA strands, the product being a three-dimensional **composite** with low solubility that may have potential application in nerve grafts.

L17 ANSWER 24 OF 42 MEDLINE on STN
ACCESSION NUMBER: 2000447094 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10999666
TITLE: Age-related changes and effect of exercise on the molecular **composition** of immature equine superficial digital flexor tendons.
AUTHOR: Cherdchutham W; Becker C; Smith R K; Barneveld A; van Weeren P R
CORPORATE SOURCE: Department of Equine Sciences, Faculty of Veterinary Medicine, Utrecht University, The Netherlands.
SOURCE: Equine veterinary journal. Supplement, (1999 Nov) (31) 86-94.
Journal code: 9614088.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: (CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200010
ENTRY DATE: Entered STN: 20001027
Last Updated on STN: 20001027
Entered Medline: 20001019

AB To test the hypothesis that exercise at very young age may influence the eventual molecular **composition** (and hence the biomechanical properties) of tendon tissue in the horse, 43 Dutch Warmblood foals were allotted to 3 differently exercised groups (box-rest, box-rest with training and pasture exercise). Twenty-four superficial digital flexor tendons (SDFTs) were collected at age 5 months (8 from each exercise group) and the others were obtained at 11 months after an additional period of light exercise that was equal for all remaining foals and was intended to see if any induced changes would be reversible or not. Significant changes in DNA content (cellularity), **hyaluronic acid** (HA) and polysulphated glycosaminoglycans (PSGAGs) were found after the 5 month period of different exercise regimens. There was a tendency towards an exercise-related effect on hydroxylysine content and number of hydroxylysylpyridinoline (HP) **crosslinks**. Levels of Cartilage Oligomeric Matrix **Protein** (COMP), measured by homologous inhibition ELISA, showed significant differences at 5 months and were highest in foals kept at pasture and lowest in foals maintained in a box but given enforced exercise. At 11 months, the biochemical parameters of the tendons from the foals of the former box-rest and pasture groups became similar, indicating the capacity of the immature tendon to recover from a retarded development. However, the ratio of PSGAGs per unit of DNA of the former training group was significantly lower than those from the other groups, suggesting that the training regimen in this study had a lasting negative effect on the tenocytes resulting in a decrease of the production of PSGAGs. Therefore, inappropriate or excessive exercise may damage developing tendon, with limited recovery after normalising the exercise level. These possibly deleterious effects of a training regimen on tendon development may be important for the management of young would-be equine athletes.

L17 ANSWER 25 OF 42 EMBASE

on STN
ACCESSION NUMBER: 1998140290 EMBASE
TITLE: **Protein** release from alginate matrices.
AUTHOR: Gombotz W.R.; Siong Fong Wee
CORPORATE SOURCE: W.R. Gombotz, Analytical Chem./Formulation Dept., Immunex Corporation, 51 University Street, Seattle, WA 98101, United States
SOURCE: Advanced Drug Delivery Reviews, (4 May 1998) 31/3 (267-285).
Refs: 129
ISSN: 0169-409X CODEN: ADDREP
PUBLISHER IDENT.: S 0169-409X(97)00124-5
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 037 Drug Literature Index
039 Pharmacy
LANGUAGE: English
SUMMARY LANGUAGE: English

AB There are a variety of both natural and synthetic polymeric systems that have been investigated for the controlled release of **proteins**. Many of the procedures employed to incorporate **proteins** into a polymeric matrix can be harsh and often cause denaturation of the active agent. Alginate, a naturally occurring biopolymer extracted from brown algae (kelp), has several unique properties that have enabled it to be used as a matrix for the entrapment and/or delivery of a variety of biological agents. Alginate polymers are a family of linear unbranched **polysaccharides** which contain varying amounts of 1,4'-linked β-D-mannuronic acid and α-L-guluronic acid residues. The residues may vary widely in **composition** and sequence and are arranged in a pattern of blocks along the chain. Alginate can be ionically **crosslinked** by the addition of divalent cations in aqueous solution. The relatively mild gelation process has enabled not only **proteins**, but cells and DNA to be incorporated into alginate matrices with retention of full biological activity. Furthermore, by selection of the type of alginate and coating agent, the pore size, degradation rate, and ultimately release kinetics can be controlled. Gels of different morphologies can be prepared including large block matrices, large beads (>1 mm in diameter) and microbeads (<0.2 mm in diameter). In situ gelling systems have also been made by the application of alginate to the cornea, or on the surfaces of wounds. Alginate is a bioadhesive polymer which can be advantageous for the site specific delivery to mucosal tissues. All of these properties, in addition to the nonimmunogenicity of alginate, have led to an increased use of this polymer as a **protein** delivery system. This review will discuss the chemistry of alginate, its gelation mechanisms, and the physical properties of alginate gels. Emphasis will be placed on applications in which biomolecules have been incorporated into and released from alginate systems.

L17 ANSWER 26 OF 42 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 1998143690 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9473616
TITLE: Immunocytochemistry of formalin-fixed human brain tissues: microwave irradiation of free-floating sections.
AUTHOR: Shiurba R A; Spooner E T; Ishiguro K; Takahashi M; Yoshida R; Wheelock T R; Imahori K; Cataldo A M; Nixon R A
CORPORATE SOURCE: Laboratories for Molecular Neuroscience, McLean Hospital, Harvard Medical School, Belmont, MA 02178, USA.
SOURCE: Brain research. Brain research protocols, (1998 Jan) 2 (2) 109-19.

Journal code: 9716650. ISSN: 1385-299X.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199804
ENTRY DATE: Entered STN: 19980416
Last Updated on STN: 19980416
Entered Medline: 19980403

AB Formalin fixation, the chemical process in which formaldehyde binds to cells and tissues, is widely used to preserve human brain specimens from autolytic decomposition. Ultrastructure of cellular and mitochondrial membranes is markedly altered by vesiculation, but this does not interfere with diagnostic evaluation of neurohistology by light microscopy. Serious difficulties are encountered, however, when immunocytochemical staining is attempted. Antigens that are immunoreactive in unfixed frozen sections and **protein** extracts appear to be concealed or destroyed in formalin-fixed tissues. In dilute aqueous solution, formaldehyde is in equilibrium with methylene glycol and its polymeric hydrates, the balance by far in favor of methylene glyco. Carbonylic formaldehyde is a reactive electrophilic species well known for **crosslinking** functional groups in tissue **proteins**, nucleic acids, and **polysaccharides**. Some of its methylene **crosslinks** are readily hydrolyzed. Others are stable and irreversible. During immunostaining reactions, intra- and inter-molecular links between macromolecules limit antibody permeation of tissue sections, alter **protein** secondary structure, and reduce accessibility of antigenic determinants . Accordingly, immunoreactivity is diminished for many antigens. Tissues are rapidly penetrated by methylene glycol, but formaldehyde binding to cellular constituents is relatively slow, increasing progressively until equilibrium is reached. In addition, prolonged storage in formalin may result in acidification of human brain specimens. Low pH favors dissociation of methylene glycol into formaldehyde, further reducing both classical staining and antigen detectability. Various procedures have been devised to counter the antigen masking effects of formaldehyde. Examples include pretreatment of tissue sections with proteases, formic acid, or ultrasound. Recently, heating of mounted sections in ionic salt solution by microwave energy was found to restore many antigens. Theory and practice of microwave antigen retrieval are covered extensively in the handbook Microwave Cookbook for Microscopists. A concise overview of microwave methods in the neurosciences has been published, and clinical applications have been reviewed. In this context, it should be noted that fresh tissues may be stabilized for immunocytochemistry by reversible, non-chemical binding processes such as cryosectioning after microwave treatment and freeze-drying. Thus, it may be possible to enhance immunostaining for some antigens by microwave irradiation of unfixed as well as fixed specimens. Parameters to be optimized for microwave retrieval of specific antigens include temperature, irradiation time, tissue buffer **composition**, salt concentration, and pH. Temperature, irradiation time, and pH are key variables. With this in mind, an optimal method was developed for retrieval of a wide variety of antigens in human brain tissues. Typical microwave protocols employ elevated temperatures that may reach 100 degrees C, where denaturation causes irreversible uncoiling and disruption of **protein** secondary and tertiary structures. Under these conditions, stable covalent bonds securing methylene **crosslinks** between polypeptides remain intact, but more reactive links formed by Schiff bases may be hydrolyzed. Resultant conformational changes presumably expose buried loops of continuous amino acids and protruding regions, increasing accessibility of their epitopes.

Protein denaturation seems to be a reasonable explanation for the effects of microwaves on antigen retrieval. This idea is supported by the observation that denaturing solutions such as 6 M urea increase immunoreactivity of some antigens. Still, the molecular basis of these effects remains unresolved, in part due to the complex chemistry of formaldehyde reactions with tissue constituents. Indeed, some methylene bridges between similar groups such as NH2 and NH may be hydrolyzed by washing fixed tissues in distilled wa

L17 ANSWER 27 OF 42 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 97154224 EMBASE
DOCUMENT NUMBER: 1997154224
TITLE: Structural characterization of organized systems of **polysaccharides** and phospholipids by light scattering spectroscopy and electron microscopy.
AUTHOR: Santos N.C.; Sousa A.M.A.; Betbeder D.; Prieto M.; Castanho M.A.R.B.
CORPORATE SOURCE: M.A.R.B. Castanho, Centro de Quimica-Fisica Molecular, Instituto Superior Tecnico, 1096 Lisboa Codex, Portugal. pcmcastanho@alfa.ist.utl.pt.
SOURCE: Carbohydrate Research, (1997) 300/1 (31-40). Refs: 33 ISSN: 0008-6215 CODEN: CRBRAT
PUBLISHER IDENT.: S 0008-6215(97)00025-6
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 029 Clinical Biochemistry
037 Drug Literature Index
039 Pharmacy
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Biovectors are recently developed nanoparticles intended to be used as drug carriers and in the formulation of vaccines. The Biovectors are composed of a **polysaccharide** core to which phospholipids and cholesterol can be added. The cores are prepared by disruption of a gel of **cross-linked** maltodextrins, and can have a positive, neutral or negative charge depending on the grafting ionic ligands used. In this study static and dynamic light scattering measurements were combined to characterize the structure of these Biovectors. Transmission electron microscopy was also used. The present work, carried out with positively charged Biovectors in PBS (phosphate buffer saline) and phosphate buffer, points towards a microgel like structure to the **polysaccharide** fragments of these Biovectors and a spherical geometry with radius .apprx. 50 nm. The influence of lipid **composition** on Biovectors size and density was also studied. The use of transmission electron microscopy gives first evidence for a structure consisting of several phospholipid bilayers surrounding a **polysaccharide** core. This organized lipidic environment is suitable for hydrophobic drug interaction and membrane **proteins** insertion, The formulation of a stable, highly controlled drug delivery system or vaccine formulation is implicated.

L17 ANSWER 28 OF 42 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 96043223 EMBASE
DOCUMENT NUMBER: 1996043223
TITLE: Siliceous materials with the surface polymer layer composed of dextran polyimine mixture as column packings for liquid chromatography.

AUTHOR: Dawidowicz A.L.; Wasilewska D.; Radkiewicz S.
CORPORATE SOURCE: Dept Chem Phys./Physicochem Separat., Faculty of Chemistry, Maria Curie Sklodowska University, Pl.M.C. Sklodowska 3,20-031 Lublin, Poland
SOURCE: Chromatographia, (1996) 42/1-2 (49-55).
ISSN: 0009-5893 CODEN: CHRGB7
COUNTRY: Germany
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Forming a polymer layer on the surface of siliceous materials is one of the methods for protecting the silica skeleton from dissolution in alkaline mobile phases as well as eliminating the negative influence of silanol groups on separated molecules e.g. **proteins**. **Polysaccharides**, especially their derivatives bearing amine groups, can play the role of the surface layer. This paper discusses the possibilities of preparing such a layer by **cross-linking** a dextran-polyimine mixture (rather than the traditionally used DEAE-dextran) deposited on the surface of the solid material. The results presented prove the utility of synthesized materials as supports for affinity ligands in high performance affinity chromatography or as supports for complexed metal ions in ligand-exchange chromatography. The properties of the sorbents with a polymer layer can be changed both by the **composition** of the **cross-linked** mixture and by chemical modification.

L17 ANSWER 29 OF 42 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 94084570 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8261331
TITLE: Characterization of the cell wall of Butyrivibrio species.
AUTHOR: Hespell R B; Kato K; Costerton J W
CORPORATE SOURCE: National Center for Agricultural Utilization Research, Agricultural Research Service, United States Department of Agriculture, Peoria, IL 61604.
SOURCE: Canadian journal of microbiology, (1993 Oct) 39 (10) 912-21.
Journal code: 0372707. ISSN: 0008-4166.
PUB. COUNTRY: Canada
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199401
ENTRY DATE: Entered STN: 19940209
Last Updated on STN: 19940209
Entered Medline: 19940121
AB Most Butyrivibrio strains have been isolated from the gastrointestinal tract of animals and have been classified as Butyrivibrio fibrisolvens. A few strains isolated from human feces are designated as Butyrivibrio crossatus, the other species in this genus. Butyrivibrio fibrisolvens strains are anaerobic, curved rods that produce butyrate, but numerous studies have shown that these strains display considerable variations in phenotypic properties and heterogeneity in DNA relatedness. Although over 60 strains have been characterized in these respects, the cell wall structure of only a few strains has been studied. In this study, cell wall related properties of 12 strains representative of five DNA relatedness groups were examined. All strains were very sensitive to penicillin and other antibiotics that interfere with cell wall synthesis. Although an occasional resistant strain was found, most strains were

sensitive to a variety of **protein** synthesis antibiotics that included aminoglycosides and tetracycline. In contrast, all strains were highly resistant to nalidixic acid. Peptidoglycans were isolated from seven B. fibrisolvens strains and Lachnospira multiparus. **Compositional** analyses indicated molar ratios of 0.7:2:2:1:0.8 for muramic acid, glucosamine, alanine, glutamic acid, and diaminopimelic acid, respectively, in all peptidoglycans, which also showed a low degree of **cross-linking**. A trichloroacetic acid extractable galactosamine-containing **polysaccharide** copurified with the Butyrivibrio peptidoglycans. Electron microscopy of thin sections showed all strains to possess a Gram-positive type of cell wall that was atypically thin (12-18 nm). Most strains also displayed external (surface) **polysaccharide** layers. Cytoplasmic inclusions and granules were evident in many strains and were composed of **polysaccharides**, on the basis of cell **composition** analyses. The findings that Butyrivibrio strains have overall similarities in cell wall properties, but differences in DNA relatedness, suggest that these organisms should be classified as several more species in the same genus or family.

L17 ANSWER 30 OF 42 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 93245841 EMBASE
DOCUMENT NUMBER: 1993245841
TITLE: The preparation of sorbents for the analysis of human antithrombin III by means of high performance affinity chromatography.
AUTHOR: Dawidowicz A.L.; Rauckyte T.; Rogalski J.
CORPORATE SOURCE: Dept. Chem. Ph./Phchem. Sep. Methods, Maria Curie Sklodowska University, M.C. Sklodowska Square 3,20-031 Lublin, Poland
SOURCE: Chromatographia, (1993) 37/3-4 (168-172). ISSN: 0009-5893 CODEN: CHRGB7
COUNTRY: Germany
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 025 Hematology
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Antithrombin III (AT III) is an anticoagulant present in blood. It is responsible among other things for blood coagulation and the wrong amount can lead to various health problems. The level of AT III can be taken as an indicator of many pathological states. Due to the very complex **composition** of blood, high performance affinity chromatography seems to be one of the best methods for the quantitative determination of AT III. The present paper deals with the preparation and properties of sorbents for AT III analysis. The behaviour of the chromatographic packings obtained by the bonding of heparin (used as a complementary ligand interacting with AT III) to **cross-linked** **polysaccharide** layers deposited on controlled porosity glass is discussed.

L17 ANSWER 31 OF 42 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 91214383 EMBASE
DOCUMENT NUMBER: 1991214383
TITLE: Analysis of murein and murein precursors during antibiotic-induced lysis of Escherichia coli.
AUTHOR: Kohlrausch U.; Holtje J.-V.
CORPORATE SOURCE: Abteilung Biochemie, Max-Planck-Institut fur

Entwicklungsbiologie, Spemannstrasse 35, 7400 Tubingen, Germany
SOURCE: Journal of Bacteriology, (1991) 173/11 (3425-3431). ISSN: 0021-9193 CODEN: JOBAAY
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
030 Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Lysis of Escherichia coli induced by either D-cycloserine, moenomycin, or penicillin G was monitored by studying murein metabolism. The levels of the soluble murein precursor UDP-N-acetylmuramyl-L-alanyl-D-glutamyl-m-diaminopimelyl-D-alanyl-D- alanine (UDP-MurNAc-pentapeptide) and the carrier-linked MurNAc-(pentapeptide)-pyrophosphoryl-undecaprenol as well as N-acetylglucosamine-β-1,4-MurNAc-(pentapeptide)-pyrophosphoryl-undecaprenol varied in a specific way. In the presence of penicillin, which is known to interfere with the **cross-linking** of murein, the concentration of the lipid-linked precursors unexpectedly decreased before the onset of lysis, although the level of UDP-MurNAc-pentapeptide remained normal. In the case of moenomycin, which specifically blocks the formation of the murein **polysaccharide** strands, the lipid-linked precursors as well as UDP-MurNAc-pentapeptide accumulated as was expected. D-Cycloserine, which inhibits the biosynthesis of UDP-MurNAc-pentapeptide, consequently caused a decrease in all three precursors. The muropeptide **composition** of the murein showed general changes such as an increase in the unusual DL-cross bridge between two neighboring meso-diaminopimelic acid residues and, as a result of uncontrolled DL- and DD-carboxypeptidase activity, an increase in tripeptidyl and a decrease in tetrapeptidyl and pentapeptidyl moieties. The average length of the glycan strands decreased. When the glycan strands were fractionated according to length, a dramatic increase in the amount of single disaccharide units was observed not only in the presence of penicillin but also in the presence of moenomycin. This result is explained by the action of an exo-muramidase, such as the lytic transglycosylases present in E. coli. It is proposed that antibiotic-induced bacteriolysis is the result of a zipperlike splitting of the murein net by exo-muramidases locally restricted to the equatorial zone of the cell.

L17 ANSWER 32 OF 42 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 1990-069099 [10] WPIDS
DOC. NO. CPI: C1990-030253
TITLE: Biodegradable hydrogel matrix for drug delivery system - comprises **crosslinked** polysaccharide and protein or protein microspheres, for controlled drug release.
DERWENT CLASS: A96 B07 P32
INVENTOR(S): FEIJEN, J
PATENT ASSIGNEE(S): (THER-N) THERATECH INC
COUNTRY COUNT: 19
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 357401	A	19900307	(199010)*	EN	20
R: AT BE CH DE ES FR GB GR IT LI LU NL SE					
AU 8940126	A	19900308	(199019)		
US 4925677	A	19900515	(199024)		

JP 02188534	A	19900724 (199035)		
US 5041292	A	19910820 (199136)		
AU 9216163	A	19920709 (199235)		
EP 357401	B1	19930331 (199313)	EN	24
R: AT BE CH DE ES FR GB GR IT LI LU NL SE				
DE 68905722	E	19930506 (199319)		
AU 649533	B	19940526 (199426)		
ES 2054010	T3	19940801 (199432)		
IE 62977	B	19950308 (199520)		
CA 1338958	C	19970304 (199721)		
JP 2960079	B2	19991006 (199947)		16
KR 166057	B1	19990115 (200038)		

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE
EP 357401	A		EP 1989-308775	19890830
US 4925677	A		US 1988-238802	19880831
JP 02188534	A		JP 1989-227282	19890831
US 5041292	A		US 1990-473645	19900201
AU 9216163	A		AU 1992-16163	19920511
		Div ex	AU 1989-40126	
EP 357401	B1		EP 1989-308775	19890830
DE 68905722	E		DE 1989-605722	19890830
			EP 1989-308775	19890830
AU 649533	B		AU 1992-16163	19920511
		Div ex	AU 1989-40126	
ES 2054010	T3		EP 1989-308775	19890830
IE 62977	B		IE 1989-2796	19890830
CA 1338958	C		CA 1989-608630	19890817
JP 2960079	B2		JP 1989-227282	19890831
KR 166057	B1		KR 1989-12544	19890831

FILING DETAILS:

PATENT NO	KIND		PATENT NO
DE 68905722	E	Based on	EP 357401
AU 649533	B	Previous Publ.	AU 9216163
ES 2054010	T3	Based on	EP 357401
JP 2960079	B2	Previous Publ.	JP 02188534

PRIORITY APPLN. INFO: US 1988-238802 19880831; US 1990-473645 19900201

AN 1990-069099 [10] WPIDS

AB EP 357401 A UPAB: 19991207

(A) A drug delivery system comprises a biodegradable hydrogel matrix comprising a polysaccharide (I), a protein (II) and a **cross-linking** agent providing network linkage between them, the weight ratio of (I) to (II) being in the range 10:90 to 90:10, the drug being contained within the matrix.

(B) A method for the preparation of microspheres useful in the controlled release of drugs comprises preparing an aqueous solution of a selected protein, mixing this solution with oil in a volume ratio of oil to protein solution of from 1:1 to 500:1 and isolating the microspheres so formed.

USE/ADVANTAGE - The system is useful for the controlled release of pharmacologically active agents. The hydrogel has enhanced biocompatibility compared with previously used hydrogels. Its blood

compatibility is improved, immunogenicity is minimized and the hydrogel is enzymatically degraded to endogenous, non-toxic cpds.

ABEQ EP 357401 B UPAB: 19930928
A drug delivery system comprising: (a) a biodegradable hydrogen matrix comprising a protein, a polysaccharide, and a **crosslinking** agent providing network linkage therebetween wherein the weight ratio of polysaccharide to protein in the matrix is in the range of 10:90 to 90:10 and wherein the **crosslinking** agent forms an amide bond or a Schiff-base with the protein and the polysaccharide; and (b) a drug contained within the matrix.
0/12

ABEQ US 4925677 A UPAB: 19930928
Drug delivery system comprises (a) biodegradable endogenous hydrogel matrix contg. protein, polysaccharide and **crosslinking** agent providing network linkage; and (b) a drug within (a) to provide systemic or local effect. Wt. ratio **polysaccharide:protein** in matrix is 10:90-90:10.

Protein pref. comprises albumin, basein, fibrinogen, gamma-globulin, ferritin, elastin or synthetic alpha-amino peptide. Polysaccharide comprises heparin (fragment), heparan, heparan sulphate, chondroitin sulphate, and/or dextran.

ADVANTAGE - Degradation kinetics, deg. of uptake, and overall timed release profile can be controlled by varying temp., ionic strength and matrix **compsn.**.

ABEQ US 5041292 A UPAB: 19930928
Prepn. of microspheres comprises: (a) preparing an aq. soln. of a selected protein and polysaccharide, where wt. ratio of polysaccharide to protein in the soln. is 10:90 to 90:10; (b) admixing the protein soln. with oil giving an emulsion with vol. ratio of oil to protein is 1:1 to 500:1; (c) introducing a **cross-linking** agent to the emulsion to **cross-link** the protein and polysaccharide; and (d) isolating the microspheres formed. Pref. an effective amt. of drug, selected from proteins, enzymes, mucopolysaccharides, peptides, hormones, antibodies and cytostatic agents, is loaded onto the microspheres by immersing them in a soln. of the drug.

The polysaccharide is selected from heparin (fragments), heparan, heparan sulphate, chondroitin sulphate. Thee protein is selected from, albumin, casein, fibrinogen, gamma globulin, haemoglobin, ferritin, elastin and synthetic alpha-amino peptides.

USE - For controlled release drugs.

L17 ANSWER 33 OF 42 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 91056110 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2243104
TITLE: The species-specific cell-binding site of the aggregation factor from the sponge Microciona prolifera is a highly repetitive novel glycan containing glucuronic acid, fucose, and mannose.
AUTHOR: Misevic G N; Burger M M
CORPORATE SOURCE: Department of Research, University Hospital of Basel, Switzerland.
SOURCE: Journal of biological chemistry, (1990 Nov 25) 265 (33) 20577-84.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199012
ENTRY DATE: Entered STN: 19910222

Last Updated on STN: 20000303
Entered Medline: 19901228

AB Species-specific adhesion of dissociated cells from the marine sponge Microciona prolifera is mediated by a Mr = 2 x 10(7) proteoglycan-like aggregation factor (MAF) via two highly polyvalent functional domains, a cell-binding and a self-interaction domain. Glycopeptide N-glycosidase F release of a major glycan of Mr = 6.3 gamma 10(3) (G-6) from the MAF **protein** core resulted in the loss of cell binding activity, indicating a role of this **polysaccharide** molecule in MAF-cell association. The G-6 glycan was isolated and purified after complete Pronase digestion of MAF using gel electrophoresis, gel filtration, and ion exchange chromatography. Quantification of the amount of carbohydrate recovered in G-6 showed that one MAF molecule has about 950 repeats of this glycan. In its monomeric state G-6 did not display any measurable binding to cells (K alpha less than or equal to 10(3) M-1). Intermolecular **cross-linking** of the G-6 glycan with glutaraldehyde resulted, however, in the concomitant recovery of polyvalency (about 2200 repeats of G-6 per polymer of Mr greater than or equal to 1.5 x 10(7) and species-specific high cell binding affinity (K alpha = 1.6 x 10(9) M-1) but not of the MAF-MAF self-interaction activity. Thus, the G-6 glycan is the multiple low affinity cell-binding site involved in cell-cell recognition and adhesion of sponge cells. The G-6 glycan has 7 glucuronic acids, 3 fucoses, 2 mannoses, 5 galactoses, 14 N-acetylglucosamines, 2 sulfates, and 1 asparagine. Such a unique chemical **composition** indicates a new type of structure which includes features of glycosaminolycans and N-linked **polysaccharides**.

L17 ANSWER 34 OF 42 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 1989-001373 [01] WPIDS
DOC. NO. CPI: C1989-000537
TITLE: Homogeneous **composite** polymers for liquid chromatography - comprises mixture of silica and copolymer of acrylic vinyl or allyl cpd. and **crosslinking** acrylic or allylic monomer.
DERWENT CLASS: A14 A89 J04
INVENTOR(S): BOSCHETTI, E; GIROT, P
PATENT ASSIGNEE(S): (IBFI-N) IBF
COUNTRY COUNT: 16
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 296926	A	19881228	(198901)*	FR	7
R: AT BE CH DE ES FR GB GR IT LI LU NL SE					
FR 2616437	A	19881216	(198906)		
JP 01079247	A	19890324	(198918)		
US 5053135	A	19911001	(199142)		5
US 5075371	A	19911224	(199203)		5
CA 1302614	C	19920602	(199228)	FR	
EP 296926	B1	19921014	(199242)	FR	8
R: AT BE CH DE ES FR GB GR IT LI LU NL SE					
DE 3875287	G	19921119	(199248)		
ES 2052756	T3	19940716	(199430)		
JP 2839144	B2	19981216	(199904)		5

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE

EP 296926	A	EP 1988-401424	19880610
FR 2616437	A	FR 1987-8125	19870611
JP 01079247	A	JP 1988-140643	19880609
US 5053135	A	US 1990-521988	19900511
US 5075371	A	US 1990-619822	19901129
CA 1302614	C	CA 1988-569262	19880610
EP 296926	B1	EP 1988-401424	19880610
DE 3875287	G	DE 1988-3875287	19880610
		EP 1988-401424	19880610
ES 2052756	T3	EP 1988-401424	19880610
JP 2839144	B2	JP 1988-140643	19880609

FILING DETAILS:

PATENT NO	KIND		PATENT NO
DE 3875287	G	Based on	EP 296926
ES 2052756	T3	Based on	EP 296926
JP 2839144	B2	Previous Publ.	JP 01079247

PRIORITY APPLN. INFO: FR 1987-8125 19870611
AN 1989-001373 [01] WPIDS
AB EP 296926 A UPAB: 19930923
Homogeneous **composite** polymers contain in interpenetrated form 20-80 (20-50) weight% silica and 80-20 (80-50) weight% of a tridimensional **crosslinked** copolymer of 98-70 weight% monofunctional acrylic, vinyl or allyl monomer and 2-30 weight% **crosslinking** acrylic or allylic monomer.

Pref. the monofunctional monomer is (meth)acrylamide; N(tris(hydroxymethyl)methyl) (meth)acrylamide; methylolacrylamide, polyethyleneglycol acrylate; N-(meth)acryloyl 2-amino 2-hydroxymethyl propanediol-1,3, etc. The **crosslinking** monomer is N,N'-diallyltartradiamide; N,N'-methylene-bis-acrylamide, etc.

USE/ADVANTAGE - The prods. are used in liquid chromatographic techniques, partic. for separating biological cpds. (e.g. sugars, aminoacids, nucleotides and proteins). The **composite** is stable to heat, inert to bacterial or enzymatic attack, chemically stable in presence of chaotropic agents and detergents and can be used within a wide pH range.

0/0
ABEQ DE 3875287 G UPAB: 19930923
Homogeneous **composite** polymers contain in interpenetrated form 20-80 (20-50) wt.% silica and 80-20 (80-50) wt.% of a tridimensional **crosslinked** copolymer of 98-70 wt.% monofunctional acrylic, vinyl or allyl monomer and 2-30 wt.% **crosslinking** acrylic or allylic monomer.

Pref. the monofunctional monomer is (meth)acrylamide; N(tris(hydroxymethyl)methyl) (meth)acrylamide; methylolacrylamide, polyethyleneglycol acrylate; N-(meth)acryloyl 2-amino 2-hydroxymethyl propanediol-1,3, etc. The **crosslinking** monomer is N,N'-diallyltartradiamide; N,N'-methylene-bis-acrylamide, etc.

USE/ADVANTAGE - The prods. are used in liquid chromatographic techniques, partic. for separating biological cpds. (e.g. sugars, aminoacids, nucleotides and proteins). The **composite** is stable to heat, inert to bacterial or enzymatic attack, chemically stable in presence of chaotropic agents and detergents and can be used within a wide pH range.

ABEQ EP 296926 B UPAB: 19930923
Homogeneous **composite** polymers containing, in an interpenetrated form, 20% to 80% by weight of silica and 80% to 20% by weight of a

three-dimensional **crosslinked** acrylic, vinyl and/or allyl copolymer comprising, in a copolymerised form, 98% to 70% by weight of at least one monofunctional acrylic, vinyl or allyl monomer and 2% to 30% by weight of a difunctional acrylic or allyl **crosslinking** monomer.
0/0

ABEQ US 5053135 A UPAB: 19930923
Components of a liq. mixt. are sepd. by liq. chromatography, by contacting it with a homogeneous **composite** hydrophilic polymer. Polymer contains an interpenetrated form contg. 20-80 wt% of silica and 80-20 wt.% of 3-dimensional **crosslinked** vinyl copolymer formed by copolymerisation of 98-70 wt.% of vinyl monomer(s) and 2-30 wt.% of difunctional acrylic or allyl **crosslinking** monomer(s) in an aq. Na2SiO3 medium.
USE - For sepn. of biological cpds., e.g. sugars, aminoacids, nucleotides, **polysaccharides**, **proteins**, nucleic acid, polymers, etc.

ABEQ US 5075371 A UPAB: 19930923
Homogeneous **composite** hydrophilic polymer is in the form of pearls having particle dia. of 5-500 microns, contg. in an interpenetrated form, 20-80 wt.% silica, and 80-20 wt.% three-dimensional **cross-linked** vinyl copolymer formed by copolymerisation in aq. medium of 98-70 wt.% of at least one monofunctional vinyl monomer and 2-30 wt.% of a difunctional vinyl **cross-linking** monomer selected from difunctional acrylic and allyl **cross-linking** monomers.
Prepn. of **composite** polymer is also claimed.
USE - For liq. chromatography on industrial scale partic. for separation of biological cpds..

L17 ANSWER 35 OF 42 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 1988-016560 [03] WPIDS
DOC. NO. NON-CPI: N1988-012313
DOC. NO. CPI: C1988-007196
TITLE: **Composite** material - can be used for optical resolution of racemic cpds., fillers, cosmetic powder, etc..
DERWENT CLASS: A89 D21 G01 J01 S03
PATENT ASSIGNEE(S): (DAIL) DAICEL CHEM IND LTD
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 62277149	A	19871202	(198803)*		4
JP 07038943	B2	19950501	(199522)		3

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 62277149	A	JP 1986-120117	19860527
JP 07038943	B2	JP 1986-120117	19860527

FILING DETAILS:

PATENT NO	KIND		PATENT NO
JP 07038943	B2	Based on	JP 62277149

PRIORITY APPLN. INFO: JP 1986-120117 19860527
AN 1988-016560 [03] WPIDS

AB JP 62277149 A UPAB: 19930923
A **composite** material comprises that after a polymer film having a reactive gp. is formed on the surface of the porous carrier, a polymer in a solvent not solubilising it, is **crosslinked** with the reactive gp. The porous carrier has a particle size of 1 micro.m, to 1 cm., an average pore dia. of 10 angstroms to 100 micro.m and a ratio of pore dia. to particle size of 1/10 or less.
Inorganic carriers are pref. as porous carrier to organic carriers, e.g. silica, alumina, magnesia, glass, silicate, etc. The polymers having the reactive gp. (e.g. amino, hydroxyl, etc.) include esters and amides of acrylic or methacrylic acid, styrene derivs., vinyl cpds., lactam, dicarboxylic acids, **polysaccharides**, **proteins**, etc.
USE/ADVANTAGE - This **composite** material can be used for optical resolution of racemic cpds., fillers, cosmetic powder, etc. It is of hard, pressure-resistant and solvent-resistant particles, compared with the conventional polymer particles. Especially it can be used in a wide applications because of its insolubility in solvent.
0/0

L17 ANSWER 36 OF 42 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 1986-301185 [46] WPIDS
DOC. NO. NON-CPI: N1986-225019
DOC. NO. CPI: C1986-130487
TITLE: **Compsn**. for reducing unevenness of surface - comprises prod. of water soluble organic cpd. and aldehyde or ketone.
DERWENT CLASS: A18 A85 L03
PATENT ASSIGNEE(S): (MATU) MATSUSHITA ELEC IND CO LTD
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 61222226	A	19861002	(198646)*		6

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 61222226	A	JP 1985-64142	19850328

PRIORITY APPLN. INFO: JP 1985-64142 19850328
AN 1986-301185 [46] WPIDS
AB JP 61222226 A UPAB: 19930922
A cpd. produced by reaction of a water soluble organic cpd. and an aldehyde or ketone cpd. is used to flatten an uneven surface.
Examples of the water soluble organic cpd. are **polysaccharide**, **protein**, PVA, polyvinylpyrrolidone, gelatin or pullulan. The aldehyde or ketene cpd. is used as a **crosslinking** agent. The aldehyde or ketene reacts with OH-radical of the organic cpd. to form hemiacetal, acetal, hemiketal or ketal coupling.
ADVANTAGE - A good flat surface is obtd. On application to a semiconductor wafer of IC, the surface pattern may be more minute.
0/2

L17 ANSWER 37 OF 42 MEDLINE on STN
ACCESSION NUMBER: 85261476 MEDLINE
DOCUMENT NUMBER: PubMed ID: 4019522
TITLE: The phosphate diester linkage of the peptidoglycan

polysaccharide moieties of Micrococcus lysodeikticus cell wall.
AUTHOR: Nasir-ud-Din; Lhermitte M; Lamblin G; Jeanloz R W
CONTRACT NUMBER: AI-06692 (NIAID)
SOURCE: Journal of biological chemistry, (1985 Aug 25) 260 (18) 9981-7.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198509
ENTRY DATE: Entered STN: 19900320
Last Updated on STN: 19970203
Entered Medline: 19850925

AB The external **polysaccharide** is a major component of Micrococcus lysodeikticus cell wall and displays distinct **composition.** The complete structure of the external **polysaccharide** had been elucidated as a basis for investigation of the cell wall structure-function relation. However, the mode of attachment of the **polysaccharide** to the peptidoglycan through a phosphodiester was not clear due to limitations in structural and biosynthetic studies. The present study describes purification of a lysozyme-resistant nondialyzable high-molecular-weight fragment of cell wall and identifies the sugar, D-glucose, as the point of external **polysaccharide** attachment to the peptidoglycan through a phosphate diester. Kinetic studies for the acid-catalyzed release of external **polysaccharide** from the peptidoglycan were performed in parallel with synthetic [methyl-2-acetamido-3-O-(D-1-carboxyethyl)-2-deoxy-alpha-D-glucopyranoside-6-yl]-alpha-D-glucopyranosyl phosphate and alpha-D-glucopyranosyl phosphate and showed the presence of a phosphodiester linkage between external **polysaccharide** and peptidoglycan. In addition, type of phosphate residue and **cross-linking** between muramic acid and **protein** part have been determined.

L17 ANSWER 38 OF 42 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 1982-26633E [14] WPIDS
TITLE: Powdered water-absorbent wound-dressing gel - prepared by polymerising hydrophilic (meth)acrylic acid derivative in aqueous solution containing polysaccharide and/or protein.
DERWENT CLASS: A11 A14 A96 B04 D22 P34
INVENTOR(S): FISCHER, H; KICKHOEFEN, B; VAUBEL, E
PATENT ASSIGNEE(S): (PLAC) MAX PLANCK GES FOERDERUNG WISSENSCHAFTEN
COUNTRY COUNT: 21
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 48323	A	19820331	(198214)*	GE	18
R: AT BE CH DE FR GB IT LI NL SE					
DE 3036033	A	19820506	(198219)		
NO 8103236	A	19820419	(198219)		
DK 8103887	A	19820510	(198222)		
FI 8102920	A	19820531	(198225)		
JP 57082313	A	19820522	(198226)		
ZA 8106594	A	19820726	(198243)		
HU 26606	T	19830928	(198345)		
DD 201754	A	19830810	(198349)		

IL 63865 A 19840330 (198424)
CA 1171787 A 19840731 (198435)
CS 8106830 A 19840917 (198451)
EP 48323 B 19850424 (198517) GE
R: AT BE CH DE FR GB IT LI NL SE
DE 3170119 G 19850530 (198523)
US 4554156 A 19851119 (198549)
JP 61034829 B 19860809 (198636)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 48323	A	EP 1981-105755	19810721
JP 57082313	A	JP 1981-147984	19810921

PRIORITY APPLN. INFO: DE 1978-849570 19800919; DE 1980-3036033 19800924
AN 1982-26633E [14] WPIDS
AB EP 48323 A UPAB: 19930915
Powdered, organic polymer-based wound dressing **compsn.**, capable of swelling, consists of a **crosslinked** hydrophilic acrylic- or methacrylic acid derivative polymer, (A), permeated by a polysaccharide and/or protein or polypeptide capable of gelling. (A) is prepared by polymerising a hydrophilic acrylic- or methacrylic acid derivative in an aqueous solution of a polysaccharide and/or protein or polypeptide capable of gelling, in the presence of a **crosslinking** agent and standard polymerisation initiators, to form a transparent gel. The gel is dried, pref. at 30-90 (40-80) deg.C, to a residual water content less than 10 weight%, and pulverised.

In addition to wound-dressing, the powder can collect wound secretions for subsequent analysis. The powder has high water absorption capacity. The swollen particles adhere to one another to form a coherent mass which is easily removed from wound and also creates a barrier against external bacteria. The gel is transparent and allows estimation of wound colour.

ABEQ EP 48323 B UPAB: 19930915
Wound treating agent in powder form based on a swellable organic polymer, characterised in that it consists of a **crosslinked** hydrophilic acrylic or methacrylic acid amide polymer which is permeated by a gellable polysaccharide and/or protein or polypeptide and is obtainable by polymerisation of acrylic or methacrylic acid amide in the presence of a dissolved, gellable polysaccharide and/or protein or polypeptide and of a **crosslinking** agent.

L17 ANSWER 39 OF 42 MEDLINE on STN
ACCESSION NUMBER: 82202739 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7044068
TITLE: Structure and function of mucus.
AUTHOR: Silberberg A; Meyer F A
SOURCE: Advances in experimental medicine and biology, (1982) 144 53-74. Ref: 39
Journal code: 0121103. ISSN: 0065-2598.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198207
ENTRY DATE: Entered STN: 19900317

Last Updated on STN: 19900317
Entered Medline: 19820708

AB Discussing the available evidence a fairly strong case can be made for the existence of a basic glycoprotein unit, characterized by what may be a common **protein** backbone (Fig. 1). This is far less likely for the carbohydrate portion. The considerably more variability in the amount and **composition** of the carbohydrate coat and species and organ differences may arise because of this fact. Very large aggregates are built up from the basic unit using **cross-links** of disulfide bonds either intermolecularly, i.e. directly, or intramolecularly, i.e. indirectly via a possible lectin-like structure which forms its bond with some of the carbohydrate side chains. Structures of the order of 10-100 million molecular weight are to be expected which, being heavily entangled, give rise to the special rheological character of the mucus. In most instances mucus behaves rheologically like a gel. The concentration of glycoprotein in the mucus may be the most important parameter which determines the special rheological features required in a special functional context. A unified point of view, when discussing mucus structure and function, was taken. On the evidence available, it seems well justified to continue to do so.

L17 ANSWER 40 OF 42 MEDLINE on STN
ACCESSION NUMBER: 79048243 MEDLINE
DOCUMENT NUMBER: PubMed ID: 101519
TITLE: Cell envelope alterations in antibiotic-sensitive and-resistant strains of Neisseria gonorrhoeae.
AUTHOR: Guymon L F; Walstad D L; Sparling P F
SOURCE: Journal of bacteriology, (1978 Oct) 136 (1) 391-401.
Journal code: 2985120R. ISSN: 0021-9193.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197901
ENTRY DATE: Entered STN: 19900314
Last Updated on STN: 19900314
Entered Medline: 19790115

AB The cell envelopes of antibiotic-resistant and -sensitive isogenic strains of Neisseria gonorrhoeae were analyzed to determine whether acquisition of genetic loci for altered antibiotic sensitivity was accompanied by alterations in cell envelope **composition**. No differences in the **composition** of phospholipids and lipopolysaccharides were noted. Acquisition of mtr-2, which results in low-level, nonspecific increased resistance to multiple antibiotics, dyes, and detergents, was accompanied by a sevenfold increase in the amount of a minor, 52,000-molecular-weight outer membrane **protein** and a 32% increase in the extent of peptidoglycan **cross-linking**. Subsequent addition of the nonspecific hypersensitivity loci env-1 or env-2 to a strain carrying mtr-2 resulted in reversal of the phenotypic resistance determined by mtr-2 and marked reduction in both the amount of the 52,000-molecular-weight outer membrane **protein** and the extent of peptidoglycan **cross-linking**. Introduction of penB2, which results in a fourfold increase in resistance to penicillin and tetracycline, was accompanied by the disappearance of the principal outer membrane **protein** of the wild-type strain (molecular weight, 36,900) and the appearance of a new species of the principal outer membrane **protein** (molecular weight, 39,400) in the transformant.

L17 ANSWER 41 OF 42 MEDLINE on STN DUPLICATE 5
ACCESSION NUMBER: 76237517 MEDLINE

DOCUMENT NUMBER: PubMed ID: 181367
TITLE: Proteoglycan complexes from bovine heart valve. Fractionation by density-gradient centrifugation and gel filtration under dissociative conditions.
AUTHOR: Honda A; Kanke Y; Mori Y
SOURCE: Journal of biochemistry, (1976 Jan) 79 (1) 17-25. Journal code: 0376600. ISSN: 0021-924X.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197609
ENTRY DATE: Entered STN: 19900313
Last Updated on STN: 19900313
Entered Medline: 19760925

AB Proteoglycan complexes from collagenase [EC 3.4.24.3]-indigestible materials of bovine heart valves were extracted with 4 M guanidinium chloride, purified by ion-exchange column chromatography in a urea-containing solution, then fractionated by density-gradient centrifugation under dissociative conditions. Electrophoretic characteristics and enzymic susceptibility of the density-gradient fractions revealed that the glycosaminoglycans constituting the proteoglycan complexes in this indigestible materials were mainly dermatan sulfate in the top three fractions, and dermatan sulfate and chondroitin sulfates in the bottom fraction; a minor constituent which was common to all the fractions was **hyaluronic acid**. A gel-like substance (Fr. Ig) at the top of the gradient, amounting to about 25% of the loaded dry sample, contained only a trace of hydroxyproline (less than 1%) and was composed of proteodermatan sulfate, glycoprotein, and a small amount of **hyaluronic acid**. Sodium dodecyl sulfate-polyacrylamide gel electrophoretic analyses of Fr. Ig with 2-mercaptoethanol showed that the major part of the **proteins** in this gel-like substance was **cross-linked** by disulfide bridges. Chromatography of Fr. Ig on Sepharose 4B in buffered 4 M guanidinium chloride containing 2-mercaptoethanol, together with the electrophoretic patterns of the resulting fractions, suggested that proteodermatan sulfate was not associated with **hyaluronic acid** through covalent bonds. The amino acid **composition** of Fr. Ig was very similar to that reported in the literature for "dermatan sulfate-**protein** complex", and "structural glycoprotein" or "acidic structural **protein**".

L17 ANSWER 42 OF 42 JAPIO (C) 2004 JPO on STN
ACCESSION NUMBER: 2001-019893 JAPIO
TITLE: AQUEOUS COATING **COMPOSITION**
INVENTOR: KINOSHITA YASUHIRO; SHIMADA MAMORU; YAMAMORI NAOKI
PATENT ASSIGNEE(S): NIPPON PAINT CO LTD
PATENT INFORMATION:

PATENT NO	KIND	DATE	ERA	MAIN IPC
JP 2001019893	A	20010123	Heisei	C09D105-00

APPLICATION INFORMATION
STN FORMAT: JP 1999-190290 19990705
ORIGINAL: JP11190290 Heisei
PRIORITY APPLN. INFO.: JP 1999-190290 19990705
SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 2001
AN 2001-019893 JAPIO

AB PROBLEM TO BE SOLVED: To obtain an aqueous coating **composition** which contains organic volatile components in a small amount, is safe for humans and living organisms, and does not cause water pollution, etc., by using an organism-derived polymer **crosslinked** by a biodegradable **crosslinking** method.
SOLUTION: **Polysaccharides**, **protein**, and nucleic acid are preferable as the organism-derived polymer. **Crosslinking** methods capable of utilizing reactions for forming **crosslinks** with functional groups of an organism-derived polymer, such as methods using Schiff base formation, ester bond formation, Michael addition reaction, etc., are listed as the **crosslinking** methods.
Moreover, an organism-derived polymer having electric charge is used; the organism-derived polymer may be positively or negatively charged. The organism-derived polymer is preferably water-soluble, still preferably has a water solubility of 1 g/100 ml or higher, and is compounded preferably in an amount of 5 weight% or higher based on the solid content of the **composition**.

=> d ibib abs ind l4 1-2

L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:414120 HCAPLUS
DOCUMENT NUMBER: 138:380827
TITLE: Method for producing cross-linked polysaccharide-protein bio-composites
INVENTOR(S): **Tsai, Shiao-Wen; Chen, Jui-Hsiang; Yang, Chiung-Lin**
PATENT ASSIGNEE(S): Industrial Technology Research Institute, Taiwan
SOURCE: U.S. Pat. Appl. Publ., 10 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003100739	A1	20030529	US 2002-76288	20020219
PRIORITY APPLN. INFO.:			TW 2001-90119567 A	20010810

AB A method for producing cross-linked polysaccharide-protein bio-composites, comprises: (a) preparing a mixture of the polysaccharide solution and protein solution, the weight ratio of polysaccharide and protein is in a range of 20/80 to 80/20. (b) adjusting the pH value between 3 and 11 by acid and hydroxyl compound (c) processing the crosslinking reaction in the water/organic solution that contains the crosslinking agent.

IC ICM A01N037-18
ICS A61K038-00; C07K001-00; C07K014-00; C07K017-00; C09H003-00; C09H003-02; A61K038-17
NCL 530354000; 514002000
CC 5-1 (Agrochemical Bioregulators)
Section cross-reference(s): 33, 34, 35
ST polysaccharide protein biocomposite prepn crosslinking agent; hyaluronic acid protein biocomposite prepn
IT Collagens, biological studies
Gelatins, biological studies
RL: BUU (Biological use, unclassified); PNU (Preparation, unclassified); BIOL (Biological study); PREP (Preparation); USES (Uses)
(complexes with polysaccharides; preparation of cross-linked polysaccharide-protein bio-composites containing)
IT Crosslinking agents
(in preparation of cross-linked polysaccharide-protein bio-composites)
IT Glycoproteins
RL: BUU (Biological use, unclassified); PNU (Preparation, unclassified); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of cross-linked polysaccharide-protein bio-composites)
IT 1892-57-5, 1-Ethyl-3-(3-dimethylaminopropyl)-carbodiimide 59457-42-0, 1-Methyl-3-(3-dimethylaminopropyl)-carbodiimide 527687-04-3
RL: RGT (Reagent); RACT (Reactant or reagent)
(crosslinking agent in preparation of cross-linked polysaccharide-protein bio-composites)
IT 64-19-7, Acetic acid, uses 1310-58-3, Potassium hydroxide, uses 1310-73-2, Sodium hydroxide, uses 7647-01-0, Hydrogen chloride, uses 37222-67-6 178600-22-1
RL: NUU (Other use, unclassified); USES (Uses)
(pH adjuster in preparation of cross-linked polysaccharide-protein bio-composites)
IT 9000-07-1DP, Carrageenan, complexes with proteins 9000-30-0DP, Guar gum, complexes with proteins 9000-69-5DP, Pectin, complexes with proteins

9002-18-0DP, Agar, complexes with proteins 9004-32-4DP, Carboxymethyl cellulose, complexes with proteins 9004-61-9DP, Hyaluronic acid, complexes with proteins 9005-25-8DP, Starch, complexes with proteins 9005-32-7DP, Alginic acid, complexes with proteins 9012-76-4DP, Chitosan, complexes with proteins 24967-93-9DP, Chondroitin-4-sulfate, complexes with proteins 25322-46-7DP, Chondroitin-6-sulfate, complexes with proteins
RL: BUU (Biological use, unclassified); PNU (Preparation, unclassified); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of cross-linked polysaccharide-protein bio-composites containing)

IT 64-17-5, Ethanol, uses 67-56-1, Methanol, uses 67-63-0, Isopropanol, uses 67-64-1, Acetone, uses 67-66-3, Chloroform, uses 68-12-2, N,N-Dimethylformamide, uses 71-23-8, Propanol, uses 71-36-3, Butanol, uses 75-09-2, Methylene chloride, uses 78-93-3, Methyl ethyl ketone, uses 123-91-1, 1,4-Dioxane, uses 127-19-5, N,N-Dimethylacetamide 141-78-6, Ethyl acetate, uses
RL: NUU (Other use, unclassified); USES (Uses)
(solvent in preparation of cross-linked polysaccharide-protein bio-composites)

L4 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:396214 HCAPLUS
DOCUMENT NUMBER: 138:387076
TITLE: Method for producing water-insoluble polysaccharides
INVENTOR(S): Yang, Jean-Dean; **Tsai, Shiao-Wen; Chen, Jui-Hsiang; Yang, Chiung-Lin**; Hsieh, Yu-Lin
PATENT ASSIGNEE(S): Taiwan
SOURCE: U.S. Pat. Appl. Publ., 18 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003094719	A1	20030522	US 2002-40352	20020109
PRIORITY APPLN. INFO.:			TW 2001-90110451 A	20010502

AB This invention is concerned with a method for producing water-insol. polysaccharides. A method for making the water-insol. bio-compatible gel includes activating the hydroxyl-containing polysaccharides with the activating agent to form activated polysaccharides, and crosslinking the activated polysaccharides, under moderate conditions producing different shapes of the water-insol. bio-compatible gel. The water-insol. bio-compatible gels, films, porosities, powders, sheets, fibers and spheres of this invention may be applied to various medical and cosmetic uses (no data).

IC ICM B29C071-02
ICS B29C035-02; C07H015-04; C08G002-00
NCL 264041000; 264236000; 536120000; 527300000
CC 44-5 (Industrial Carbohydrates)
Section cross-reference(s): 62, 63
ST polysaccharide activation crosslinking water insol product bio compatibility gel
IT Synthetic polymeric fibers, preparation
RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(hyaluronic acid, crosslinked; method for producing water-insol. crosslinked (muco)polysaccharides)

IT Polysaccharides, preparation
RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(method for producing water-insol. crosslinked (muco)polysaccharides)

IT Mucopolysaccharides, preparation
RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(method for producing water-insol. crosslinked mucopolysaccharides)

IT Synthetic polymeric fibers, preparation
RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(pectin, crosslinked; method for producing water-insol. crosslinked (muco)polysaccharides)

IT 1310-73-2, Sodium hydroxide, uses
RL: MOA (Modifier or additive use); USES (Uses)
(activation agent; method for producing water-insol. crosslinked (muco)polysaccharides)

IT 527751-94-6P, Epichlorohydrin-ethylene glycol diglycidyl ether-glycerol diglycidyl ether-glycerol triglycidyl ether-pentaerythritol-sodium hyaluronate-polyethylene glycol diglycidyl ether copolymer
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(fibers; method for producing water-insol. crosslinked (muco)polysaccharides)

IT 161334-53-8P, Ethylene glycol diglycidyl ether-sodium hyaluronate copolymer 204277-46-3P, Ethylene glycol diglycidyl ether-sodium carboxymethyl cellulose copolymer 352565-47-0P, Ethylene glycol diglycidyl ether-sodium alginate copolymer 527751-92-4P, Chondroitin 6-sulfate-ethylene glycol diglycidyl ether copolymer 527751-93-5P, Ethylene glycol diglycidyl ether-pectin copolymer
RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(method for producing water-insol. crosslinked (muco)polysaccharides)